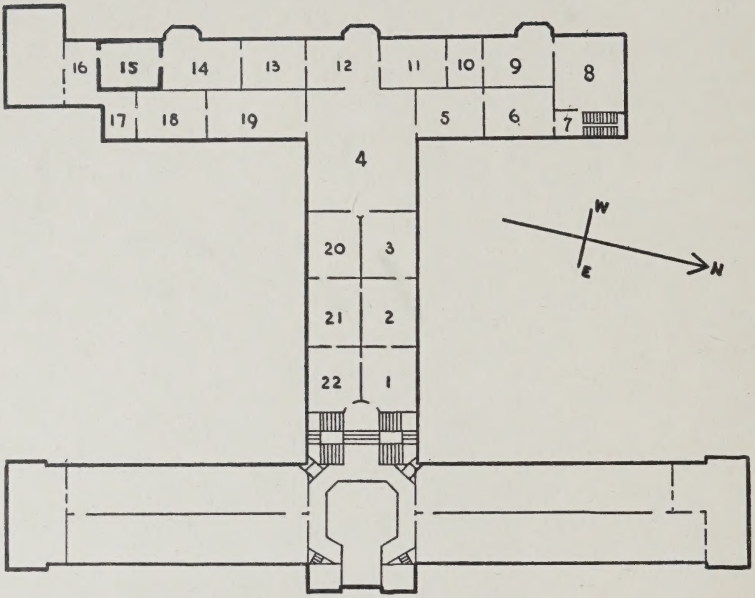
PALESTINE

ANCIENT AND MODERN

A HANDBOOK AND GUIDE TO THE PALESTINIAN COLLECTION OF THE ROYAL ONTARIO MUSEUM OF ARCHAEOLOGY · TORONTO



PLAN OF SECOND FLOOR

1 to 3 and 20 to 22	Greek Galleries
4	Prehistoric Gallery
5 to 9	Egyptian Galleries
10	Mesopotamian Gallery
11 to 14	Roman Galleries
15	Palestinian Gallery
16 to 19	Textile Galleries
Southwest end	Offices and Study Rooms
East Wing	Royal Ontario Museum of Palaeontology

Printed in Canada by the University of Toronto Press

PALESTINE, ANCIENT AND MODERN

Digitized by the Internet Archive
in 2025 with funding from
Royal Ontario Museum

https://archive.org/details/rompublication211rom

PALESTINE
ANCIENT AND MODERN

A Handbook and Guide
to the Palestinian Collection
of the Royal Ontario Museum

By

WINIFRED NEEDLER

ROYAL ONTARIO MUSEUM
OF ARCHAEOLOGY
Toronto, 1949

Copyright, Canada, 1949
by the Royal Ontario Museum
of Archaeology

NOTE

This book has been designed both as a guide to the Palestinian collection of the Royal Ontario Museum of Archaeology and as a brief handbook to the subject in general. The author is Deputy Keeper of the Near Eastern Department.

ACKNOWLEDGEMENTS

SOME of the more important works used in the preparation of this handbook are listed in the bibliography on page 91. It has not been considered necessary to publish the detailed references supporting each attribution, except in a few cases, since we wish to appeal to the general reader.

Dr. Homer Thompson supervised the project and thus the writer was given the privilege of working directly under him during his last year at the Museum. Assistance of various kinds has been given by many members of the Museum staff, among whom Mr. William Todd, preparator, Miss Dorothy Macdonald of the Textile Department and Dr. Walter Graham, Dr. Thompson's successor in the Classical Department, must be specially mentioned. Mr. Brett generously corrected the galley proofs soon after his appointment to the directorship of the Museum. The following members of the Oriental Departments of the University of Toronto gave valuable assistance by reading the manuscript and advising on special points: Professors W. E. Staples, T. J. Meek, F. V. Winnett, W. S. McCullough, and particularly R. J. Williams. The writer also wishes to acknowledge help from Mr. J. H. Classey, who had already done much research in the gallery when she started to work over the material. Others who helped on minor points are the Reverend V. L. Kennedy of the Mediaeval Institute of St. Michael's College, University of Toronto, Dr. W. P. Wallace of the Department of Greek and Roman History, University College, University of Toronto, Dr. E. L. Sukenik of the Hebrew University, Jerusalem, and Messrs. Charles Wilkinson and Walter Hauser of the Metropolitan Museum of Art, New York.

With the exception of the four pictures by the Matson Photo Service, Jerusalem, and a few others by Pringle and Booth Limited, Toronto, the photography was done by the University of Toronto Photographic Service. Miss Catherine McEwen of the Museum staff assisted with the drawings and maps.

W. N.

CONTENTS

Plan of second floor inside front cover

Acknowledgements v

List of illustrations ix

Introduction
- Purpose and scope 1
- Archaeological background 1
- The material 3

From the Old Stone Age to the Beginning of the Bronze Age
- Historical 5
- In the Museum 6

The Bronze Age
- Historical 7
- Pottery vessels 9
- Tools 13
- Weapons 13
- Garment pins 15
- Scarabs 15
- Other seals 16
- Figurines 17
- Neighbouring galleries 17

The Iron Age
- Historical 19
- Pottery vessels 21
- Other objects of daily use 25
- Figurines 26
- Seals 27
- The development of writing 27
- Neighbouring galleries 32

The Hellenistic, Roman, and Byzantine Periods
Historical 33
Pottery vessels 36
Bronze vessels 43
Glass vessels 45
Costume accessories and jewellery 46
Toilet articles 49
Tools and weapons 51
Miscellaneous household objects 53
Figurines 54
Religious and funerary objects 56
Coins 60
Neighbouring galleries 64

From the Arab Conquest to the End of Turkish Rule
Historical 66
Pottery vessels 69
Manuscripts 70

Modern Palestine
Historical 71
Pottery vessels and household equipment 75
Agriculture and the preparation of flour 80
Costume and jewellery 84

Bibliography 91

Index 103

Maps 114

Chart of Comparative Chronology *following page* 116

Plates *following page* 116

LIST OF ILLUSTRATIONS

PLATES

(*following page* 116)

I Pottery vessels of the Bronze Age.

II Copper and bronze objects of the Bronze Age: tools, weapons and garment pins.

III (*a*) Scarabs, Middle and Late Bronze Age.
(*b*) Stamp seal, Middle or Late Bronze Age.
(*c*) Cylinder seal, Middle Bronze Age.
(*d*) Scaraboid seals, about tenth century B.C.

IV (*a*) Pottery female figurines of the Bronze Age.
(*b*) Pottery female figurines of the Iron Age.

V (*a*) Pottery vessels of the Iron Age.
(*b*) Pottery rattle, pottery loom weight, limestone cosmetic pallette, all Iron Age; glass spindle whorl, probably Hellenistic period.

VI (*a*) Bronze figurine of a god, Early Iron Age.
(*b*) Bronze votive animals, Early Iron Age (?).
(*c*) Pottery animals, eighth or seventh century B.C.

VII Pottery vessels of the Hellenistic, Roman and Byzantine periods: common types.

VIII (*a*) Pottery vessels of the Hellenistic and Roman periods: better vessels.
(*b*) Sherds of Nabataean decorated pottery, first century B.C. to first century A.D.

IX Series of pottery lamps showing the development from the Bronze Age to the Arab period.

X Forms of many-wicked pottery lamps, second century B.C. to eighth century A.D.

XI (*a*) Bronze vessels of the Roman period.
(*b*) Bronze lamps, mostly Byzantine period.

XII (*a*) Bronze ritual shovel, Roman period.
(*b*) Bronze Christian censer, sixth to eighth century A.D.

XIII (*a*) Glass vessels: extreme left, fifth or fourth century B.C.; the rest third to seventh century A.D.
(*b*) Gold jewellery, probably Hellenistic period.

XIV Beads and amulets, seventh century B.C. to seventh century A.D.

XV Costume accessories, mostly bronze, Roman period.

XVI Bronze mirrors, Roman period.

XVII Iron tools of the Roman period.

XVIII Kohlsticks, spatulae, needles, spoons, hasps and keys, mostly bronze, Roman period.

XIX (*a*) Figurines of pottery and bone, Roman and Byzantine periods.
(*b*) Bronze animals, Roman period.

XX Limestone ossuaries, first century B.C. to first century A.D.

XXI Lead coffins, fourth century A.D.

XXII A selection of Palestinian coins, mostly Jewish, second century B.C. to second century A.D.

XXIII Arab pottery vessels, eighth to fourteenth century A.D.

XXIV (*a*) Samaritan manuscript, on paper, eighteenth century A.D.
(*b*) Torah scroll, on ram's skin, eighteenth century A.D. (?).
(*c*) Megillah scroll, on vellum, with silver gilt roller-case, nineteenth century A.D.

XXV Arabic Christian manuscript, on paper, nineteenth century A.D.

XXVI (*a*) Pottery vessels, modern.
(*b*) Home-made grain bin, modern.

XXVII Plow, yoke and goad, modern.

XXVIII (*a*) Iron sickles, modern.
(*b*) Wooden harvesting implements, modern.

XXIX (*a*) Rotary handmill, modern.
(*b*) A Palestinian handmill in use. (Photograph by the Matson Photo Service, Jerusalem.)

XXX (*a*) Loom for weaving a meal sieve, modern.
(*b*) Horse-hair meal sieve, modern.

XXXI (*a*) Peasant women's garments, cotton with coloured embroidery, modern.
(*b*) Man's coat of sheep's wool and goat's hair, modern.

XXXII Footwear, modern.

XXXIII (*a*) Women's headdresses, modern.
(*b*) Bethlehem woman, illustrating the manner in which some of our costume is worn. (Photograph by the Matson Photo Service, Jerusalem.)

XXXIV (*a*) Bedouin tent. (Photograph by the Matson Photo Service, Jerusalem.)
(*b*) Cotton carders, illustrating the use of our cotton bow. (Photograph by the Matson Photo Service, Jerusalem.)

XXXV Silver jewellery, modern.

Drawings in the Text

page

1. Common pottery shapes of the Early Bronze Age 9
2. Common pottery shapes of the Middle Bronze Age 10
3. Common pottery shapes of the Late Bronze Age 11

4. Stone implements of the Bronze Age 12

5. Limestone mace, probably Bronze Age (wooden handle restored) 14

6. Bronze socketed spear head, Late Bronze Age 14

7. Sketch showing the use of the garment pin (after E. Henschel-Simon, Q.D.A.P., Vol. 6, 1936-8, p. 172) 15

8. Common pottery shapes of the Iron Age 22

9. Rhodian jar-handle stamp, second century B.C. 31

10. Pilgrim flasks, moulded pottery, fifth or sixth century A.D. 40

11. Bronze strigil, Roman period 50

12. Limestone sling bullet 51

13. Bronze and iron projectile points, Hellenistic and Roman periods 52

14. Iron dagger, Byzantine period (?) 53

15. Bronze cymbals, Roman period 57

16. Clay heating brazier, modern Palestine (elevation and section) 77

17. Clay cooking brazier, modern Palestine (elevation and section) 77

18. Clay oven, modern Palestine (lid restored) 78

19. Diagram (section) to show the use of the iron cooking device used by bedouin 79

20. Types of iron plowshares, modern Palestine 81

MAPS

Ancient Palestine 114

Modern Palestine 115

Ancient Near East 116

INTRODUCTION

Purpose and scope. This handbook has been prepared to increase the usefulness of the Museum's Palestinian Collection by indicating the historical setting and by furnishing brief descriptions of the material. It is hoped that it will add to the enjoyment of visitors and also be of interest to those at a distance who are unable to come to the Museum.

The Palestinian Gallery deserves the attention of anyone interested in the history and culture of the Near East, or indeed in the general development of mankind. But since a large proportion of the visitors to this gallery are Bible students and Sunday School teachers, we have particularly kept in mind its value as background material for Bible study. Students of Jewish sacred writings form another special group of visitors and it is hoped that they too will find this booklet useful.

Ancient Palestine was seldom politically independent or economically self-sufficient, and many of its most commonly used articles were products of neighbouring lands. Therefore the following pages frequently refer the visitor to the galleries of ancient Egypt, Mesopotamia, Greece and Rome. Another gallery illustrates the earliest objects of human manufacture in Palestine, artifacts of Palaeolithic and Neolithic age. The Palestinian Gallery and the other galleries mentioned are all on the second floor, a plan of which is included.

Archaeological background. Few of the ancient objects in the Palestinian collection have come directly from scientifically excavated sites. Yet they have all been dated with

reasonable certainty, thanks to the achievements of Palestinian archaeologists during the past twenty years, and to their careful publication of vast quantities of comparable material.

Most of the excavation has been in mounds formed by the stratified débris of successive cities and in the nearby burial grounds of the ancient inhabitants. Various categories of evidence—such as geology, history, technology and style—were used to date each stratum. The tombs yielded things of daily use, or funerary imitations, deposited for the owner's comfort in the next world, and these groups of comparatively well-preserved objects were correlated with material from contemporary strata in the mound. Pottery is the most effective criterion for dating any group of associated objects, since it is common at all sites and levels, and has distinguishing characteristics for each period. An archaeological technique based on the diagnostic properties of common pottery was first elaborated at Tell el-Hesi, Palestine, in 1890, by Sir Flinders Petrie.

From that time to the present, as archaeology gradually approached the status of an exact science, Palestine has yielded increasingly spectacular results. Excavations have been sponsored by universities, museums, and archaeological societies of America, Great Britain, Germany, and France. After the first Great War and under the British Mandate the government created a Department of Antiquities which has encouraged and supervised systematic work. The most fruitful excavations have been since 1925 and there is now revealed an almost unbroken development from the Old Stone Age to modern times. The following are a few of the most important sites explored thus far.

Excavations in cave deposits of the Mount Carmel range (1929-34) have produced exhaustive scientific results for the Palaeolithic period. Caves of North Galilee (1923) and Jordan River gravels below Lake Huleh (1936-37) also contributed a great deal to the knowledge of earliest man. Im-

portant sources for the Neolithic and Chalcolithic periods are Teleilat el-Ghassul near the mouth of the Jordan River (1928-35) and Jericho (1935). Jericho is rich in material from the beginning of the Neolithic until the invasion of Palestine by the Israelites. Exceptionally detailed excavation at Tell Beit Mirsim, ancient Kiriath-Sepher in southwestern Judah, (1926-32) covered periods from the third millennium to the Babylonian Exile. The veteran archaeologist, Sir Flinders Petrie, excavated three important mounds in southern Palestine, Tell Jemmeh, Tell el-Farah and Tell el-Ajjul, all particularly rich in Bronze and Iron Age material (1926-30). Excavations at Tell ed-Duweir, ancient Lachish, (1932-38) extended from the fourth millennium to the Persian period and produced spectacular records of the time of Jeremiah. Beth-Shan (1921-41), an important Bronze and Iron Age fortress city in the Jordan Valley, has shown evidence of occupation from the fourth millennium to Arab times. Megiddo (chiefly 1925-39), in the Plain of Esdraelon, was of importance from the Palaeolithic to the Persian period, and was particularly rich in early Israelite material. Other important pre-Roman finds have been at Gezer, Ain Shems, Beth-Zur, and Samaria. Jerusalem has not been adequately explored because of the extent of the modern city, and numerous excavations in its environs have produced little earlier than Roman times. Buildings and tombs of the Roman period have been investigated at Jerusalem, Samaria, and many other places. The excavation of ancient Gerasa (1930-38) on the edge of the Syrian desert has revealed an exceptionally well preserved Roman town, and Petra, the Nabataean rock-hewn capital in southern Transjordan, has long been famous. About thirty Jewish synagogues have been recorded since 1905, chiefly in Galilee and covering the five centuries before the Arab invasion.

The material. Visitors to the Palestinian Gallery may at first find the large quantity of pottery monotonous. Its important

archaeological role, however, should add to its interest. How eloquently it can bear witness to historical events will appear in the following pages.

In spite of supreme contributions to humanity in the fields of religion and ethics, the inhabitants of Palestine have done little towards mankind's material advancement. This seeming paradox may partly be explained by the stormy history of the country. Continual struggle for existence may have helped to produce the spiritual qualities in Hebrew literature, while preventing the development of a national art. The ancient objects, nevertheless, reveal fascinating cross-currents of influences. They thus help to provide a true historical setting for the writings of the ancient Hebrews, illustrating at the same time many of the actual objects mentioned in this literature. A small country, poor in natural resources, Palestine has always been the battleground of more powerful neighbours and has straddled the trade routes from the Mediterranean to the East, and from Europe and Asia to Africa.

The modern implements, household objects, and articles of costume illustrate a primitive Palestine that has been little touched by Western machine civilization. Since many of these objects have changed their form scarcely at all through the centuries they furnish valuable supplementary material for the study of ancient daily life. The country's eventful history never failed to influence the more sophisticated arts of the towns, but passed lightly over the small farmers and craftsmen of the villages and the tent-dwellers of the uncultivated land. Now at last these simple traditions seem to be threatened with extinction as Western industry penetrates the East.

FROM THE OLD STONE AGE TO THE BEGINNING OF THE BRONZE AGE

Palaeolithic—before 12,000 B.C. (?)
Neolithic—before 4,000 B.C.
Chalcolithic—c. 4,000 – c. 3,000 B.C.

Historical. Earliest man developed in Palestine in much the same way as in Europe: living in self-sufficient family groups, making crude, unpolished stone tools, surviving by hunting, trapping, and gathering wild fruits, and, at least towards the end of the Old Stone Age, burying the dead with simple ritual. Rocky Palestine abounds in caves, which were used as dwellings not only at this houseless stage but at all later periods of Palestinian history. The "Aurignacian" culture of the late Old Stone Age is represented in Palestine, but without the wonderful cave art known in Europe.

A relatively short Neolithic or New Stone Age, in which no metal was used, is also similar in Palestine to the corresponding stage of human development elsewhere. Village sites reveal the beginnings of hoe agriculture, domestication of animals, pottery, and life in small settled communities. Palestine is, however, apparently unique in having a Mesolithic, or intermediate, period between the Old and the New Stone Ages marked by "sickle flints" which have been assumed to imply the rudiments of agriculture. This implement may have been borrowed from Egypt, where the Neolithic developed earlier than in Palestine.

During the fourth millennium a long gradual development took place corresponding to similar changes in Egypt and Mesopotamia, though at a lower cultural level. Stone tools were used exclusively, but small copper objects, such as pins and beads, sometimes appear. The pottery is often

painted and of high quality, resembling the contemporaneous North Syrian and Mesopotamian ware. To this period belong some rectangular model houses designed for ossuaries, having low solid floor supports at each corner and with gabled roofs. The houses, suggesting a wetter and more wooded country, and the pottery make it seem likely that immigrants from countries farther to the north and east were partly responsible for the advance towards civilization. Mesopotamia and Egypt had each invented a system of writing before 3000 B.C., but no trace of writing has been found in the Palestine of this early period.

In the Museum. Nothing earlier than the Bronze Age is included in the Museum's Palestinian Gallery. The Prehistoric Gallery, however, shows the gradual development of man's tools through the Old Stone Age, with improvement in technique and with progressive differentiation from the simple earliest general-purpose tool, the hand axe. This development is in general true for Palestine as well as for Europe, and many of the earliest "Chellean" type implements seen in the Prehistoric Gallery are actually from Palestine. The Prehistoric Gallery also contains a large collection of stone implements from the Neolithic period and from subsequent periods in which stone tools were still made during the increasing use of copper. These too are in general typical of Palestine. (Gallery 4.)

To review the closely parallel general developments in the Near East during the fourth millennium one should glance over the prehistoric objects in the Egyptian and Mesopotamian Galleries. It will be noticed that in both regions the pottery is superior to that of the subsequent Bronze Age, though the potter's wheel was then unknown; stone implements were particularly fine towards the approach of the Bronze Age; and industries were becoming more specialized and commerce with distant countries was increasing. Palestine echoed these trends.

THE BRONZE AGE

3000 B.C. - 1200 B.C.

Historical. "Bronze Age" is the accepted term for the period that began in the Near East about 3000 B.C. and lasted until iron came into general use for implements about 1200 B.C. The term is misleading, however, when applied to Palestine. Metal implements first came into general use in Mesopotamia and Egypt about 3000 B.C., but they were then made out of unalloyed copper. Bronze was scarcely known in Egypt and Palestine until about 2000 B.C., although worked before that time by peoples to the north. Moreover, while copper tools and weapons were plentiful in Egypt throughout the third millennium, backward Palestine was still using stone implements almost entirely.

About 3000 B.C. invaders from the northeast, bringing closer contact with Mesopotamia, built fortified cities on the hill-tops and introduced a more highly organized society. Place names and foreign literary evidence indicate that a Semitic language similar to that of Sumer and Akkad was spoken at least as early as 2500 B.C. At the same time there were commercial and perhaps even political connections with Egypt. From the beginning of the Bronze Age Egyptian ships were built with Syrian wood obtained through the Syrian port of Byblos, and about 2500 B.C. pictorial records of the pyramid builders show vanquished Syrians and Palestinians and their products.

Early in the second millennium invading northerners gradually spread southward over the Near Eastern countries. The newcomers, probably of mixed race, some at least speaking non-Semitic languages, brought the horse and chariot and bronze weapons to Palestine, and were able to dominate

the native population through their superior military knowledge. They invaded Egypt in the late eighteenth century, where they received the name "Hyksos," and they formed a group of city states across Palestine. Their rule in Palestine was contemporary with the founding of similar principalities on the Greek mainland during the golden age of Crete. Towards the end of the Hyksos period, if not earlier, Palestine had well-established trade connections with Crete and the Aegean area.

About 1560 B.C. kings of the Egyptian eighteenth dynasty drove the Hyksos out of Egypt and took possession of Palestine. From that time, under the powerful Egyptian empire, the country entered upon a three-hundred-year period of prosperity. Olive oil was exported. Mycenaean wares from the Aegean area and Egyptian luxury articles were freely imported, and imitated locally. Relations with Cyprus, important link between East and West, were particularly close. Trading communities, partly stocked by immigrant sea peoples, but speaking a Semitic tongue, were rapidly developing on the coast and became a maritime commercial nation, Phoenicia. The old Egyptian hieroglyphic and Mesopotamian cuneiform scripts were used for official purposes, while more convenient alphabetic scripts were being evolved under the stimulus of commerce. Early in the period of Egyptian domination the non-Semitic Hurrians formed the powerful state Mitanni to the north of Syria, and by the fourteenth century the Indo-European Hittites in Asia Minor to the west of Mitanni had created a great empire and penetrated into Syria. Hurrians and Hittites left their mark on the material culture of Palestine. By this time, as might be expected with such a hodge-podge of influences, Palestinians worshipped deities of many different origins. Of these the mother goddess, a local form of the Mesopotamian Ishtar, and her consort were the most important.

During the Middle Bronze Age Abraham and his people

migrated from Mesopotamia. At the end of the Late Bronze Age the Hebrews first appeared as a small nation.

Pottery vessels. The drab earthenware vessels of the Early Bronze Age sometimes show marks of the newly introduced potter's wheel, although most of them were still fashioned without it. They are usually undecorated but occasionally have simple impressed or painted linear patterns. The clay is rather coarse, the shapes are simple, and the vessels are

CASE 1
Plate 1

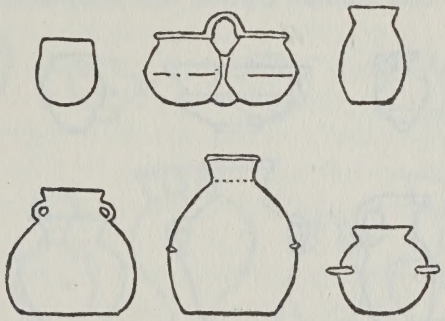


FIG. 1. Common pottery shapes of the Early Bronze Age.

lightly fired. They never possess a separately formed foot or ring base. The ledge handles were a simple hand support for carrying. In Palestine this form survived through the Early Bronze Age. At the beginning of the period a similar Egyptian form was contemporary with it and contributes to the evidence for early relations between the two countries. The vessels, decorated with impressed parallel wavy lines, a comb technique then known in north Mesopotamia, date from the end of the third millennium.

The pottery of the Middle Bronze Age or Hyksos period shows a technical advance, largely due to a more skilful use of the potter's wheel. The clay is finer and more carefully prepared, and sometimes has a polished red or white slip

CASE 2

(liquid mixture of clay and water). New and more sophisticated shapes appear. The bodies of vases and jugs are more gracefully ovoid and are often provided with a hollow foot. The mouths of the jugs are sometimes pinched to form a characteristic trefoil spout. The two-handled jar, or amphora, is a type which became firmly established at this time and was never absent later. The vessels with round and pointed bases were set into stands or into the ground or suspended in a rope net. The carinated ("keeled") bowls and the vases

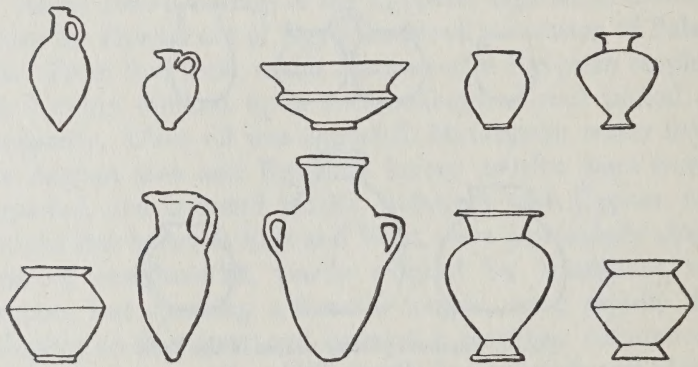


FIG. 2. Common pottery shapes of the Middle Bronze Age.

with low flaring neck and low pedestal are forms suited to metal working and strongly suggest that the makers were familiar with more costly metal vessels. The black polished jugs decorated with white incised dots and lines are thought to have been brought to Palestine from the north by the Hyksos. The other new forms were familiar to the whole of the Eastern Mediterranean area.

Most of the native pottery of the Late Bronze Age (period of Egyptian rule) was influenced by foreign styles,
CASE 3 since at this time Palestine was flooded with superior Cypriote and Mycenaean wares. The flat circular water bottle or "pilgrim" flask was indigenous to Palestine, though widely

used in other scantily watered areas. It appeared first at this period and continued with slight variations down through the ages. The cup attached to the mouth of one example suggests that these bottles sometimes contained oil into which bread was dipped. The black "Hyksos" ware is no longer seen in the Late Bronze Age. Examples of Cypriote pottery, imported and imitated locally, are the red gourd-shaped jugs with long neck and ring base and decorated with moulded or white painted lines; the wide-mouthed jug with purple linear decoration and horned handle; and the vessels

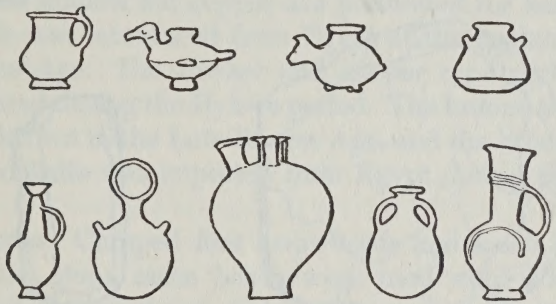


FIG. 3. Common pottery shapes of the Late Bronze Age.

in the form of animals or birds. The fat small-mouthed "stirrup vases"—oil containers, with neck, vertical spout and two small arched handles all at equal height—are Mycenaean imports, appearing after 1400 B.C. The squat angular vases with shoulder handles are local imitations of Mycenaean forms. Painted decoration on native forms also crudely imitates imports from the West. The imported Mycenaean pottery is decorated with glossy bands of paint. The Palestinian copies are dull and crude. At this period, although Palestine was under the political domination of Egypt, Egyptian pottery is conspicuously rare, for while the Egyptians manufactured the finest vessels of faience, metal, and stone, their inferior pottery could not successfully compete with the pottery of other Mediterranean regions.

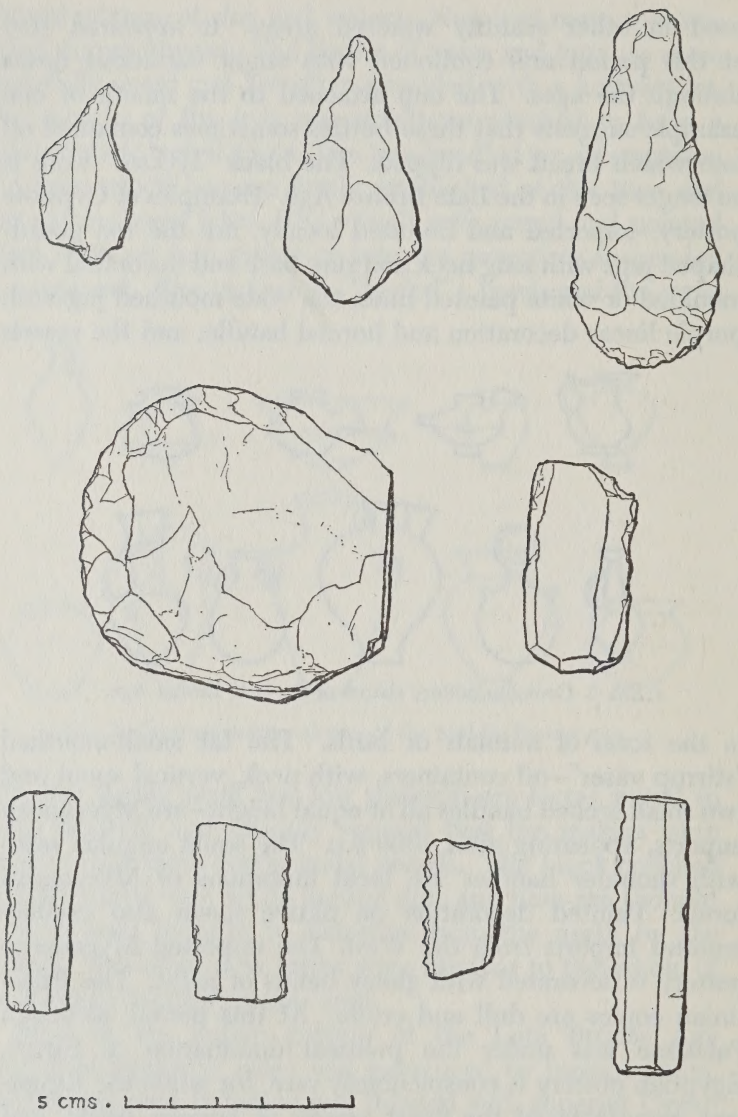


FIG. 4. Stone implements of the Bronze Age.

Tools. Examples of Bronze Age stone tools are the flaked flint scrapers, knives, and borers; the flint sickle teeth, serrated along one edge and originally set into a curved piece of wood; the saw teeth, similar to the sickle teeth in form and similarly hafted; and the stone pounder. Stone knives were used until the Late Bronze Age, gradually being replaced by metal knives. Sickles and saws with flint teeth were commonly used at all periods until the beginning of the Iron Age, and stone hammers were still being used in the first millennium B.C. *CASE 14*

The shallow flat copper axe perforated for lashing to its handle was introduced from Egypt at the beginning of the Bronze Age. The thicker and deeper type probably first appeared during the Hyksos period. The bronze chisel is of a type known in the Late Bronze Age, and the bronze double-bladed knife was imported from Egypt during that period. *Plate II*

Weapons. Chipped flint arrowheads and lance heads and polished stone mace heads were used until 2000 B.C. or later. In Mesopotamia and Egypt maces of almost identical form were used as weapons before 3000 B.C., but were reduced to mere symbols of power in the Early Bronze Age, long before Palestinians ceased to use them as weapons. *CASE 14*

The bronze weapons are much finer examples of metal working than the tools, and more quickly superseded stone. To the Hyksos period belong the daggers with short tang to receive a riveted hilt. The daggers with very long tang are a Cypriote form adopted by Syria early in the second millennium, spreading southward, and common in Palestine during the Late Bronze Age. This form is an improvement over the riveted type, since the wood, bone, or metal hilt was securely fastened by bending the tang over its end. A third type of dagger, with inlaid hilt cast in one piece with the blade, was widely spread over the Near East at the end of the Bronze Age. *Plate II*

Rapier blades can be distinguished from daggers only by their greater length. The slashing sword was scarcely known in Bronze Age Palestine. The curved scimitar is of a form which came originally from Babylonia and was brought to Egypt and to Syria during the Hyksos period; in these lands it remained during the Late Bronze Age not as a fighting weapon but as an ornament and symbol of authority.

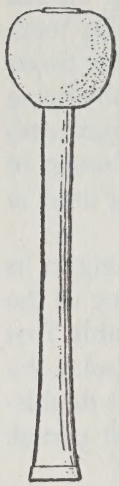


FIG. 5. Stone mace (wooden handle restored). Diameter 6 cm. (2⅜ ins.).

Spears, used for both war and hunting, were common in Palestine during the Late Bronze Age. Both tanged and socketed spear heads are shown; the socketed type, which fitted over the shaft, lasted through the Iron Age, though usually then made of iron.

The battle-axes are of three distinct forms; (1) the conservative Egyptian type of the Late Bronze Age, a shallow flat axe outcurving at the butt and simply inserted in a groove and lashed to its handle; (2) the socketed round-edged type with two perforations in the blade, known in Syria and Palestine from the Hyksos period, probably originating in regions to the northeast, and lasting through the Late Bronze Age; and (3) the very long and narrow socketed axe usually with projections to strengthen the handle; this also was known from the Hyksos period and in the Late Bronze Age was characteristic of the Hittite empire.

Tanged leaf-shaped copper arrowheads began to replace flint arrowheads about 2000 B.C. and became very common during the Late Bronze Age. The javelin heads are similar to arrowheads but larger.

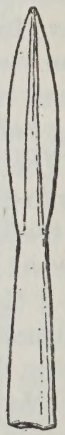


FIG. 6. Socketed spearhead. Length 22.5 cm. (8⅞ ins.).

Copper and bronze implements were at first cast in simple open moulds of stone or pottery and finished by hammering. Most of these weapons, however, were cast in closed double moulds, a more advanced technique.

Garment pins. The straight form of garment pin appeared in Palestine at the beginning of the Middle Bronze Age, and lasted until it was gradually superseded by the fibula or safety pin in the Early Iron Age. Although the straight form became very popular in the Aegean region, it appeared earlier in Palestine and therefore probably is native to the Near East. It is usually provided with an eye part-way down the shaft to attach a string which secured the pin to the garment. This was done either by winding the string between the free end-sections of the pin after the pin had been passed through the two thicknesses of cloth or by slipping a ring at the loose end of the string over the tip of the pin. The large pins have a disk instead of eye but were used in the same manner.

CASE 14
Plate II

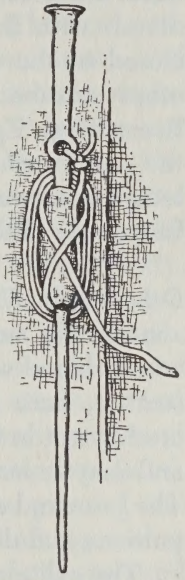


FIG. 7. The use of the garment pin, after E. Henschel-Simon (*Q.D.A.P.* 1936-38).

Scarabs. The seals or seal amulets in the form of a scarab beetle are typically Egyptian. Some are imports from Egypt and others are probably local imitations made in Palestine. The Bronze Age examples are of steatite, a soft, easily worked soapstone, and were originally glazed. They were usually mounted as the bezel of a metal finger ring, but two of the Museum's specimens were mounted for suspension, a style derived from the North or East. Although scarabs were often used actually as seals these specimens were probably merely amulets or

CASE 12
Plate III

ornaments. The incised designs on the lower surface sometimes contain names of private persons, but the Museum's scarabs from Palestine are all merely ornamental, religious, or symbolical devices, even those which contain the names of Egyptian kings. The earlier types are associated with burials of the Hyksos, who adopted the scarab during their occupation of Lower Egypt. That the Hyksos designs sometimes survived into the Late Bronze Age is shown by the scarab with the name of Amenophis III (1405-1370) enclosed in the typically Hyksos scroll border. Some of the other scarabs also bear the hieroglyphic names of Late Bronze Age Egyptian kings. These do not necessarily date the scarab, since royal names, often thought to have amuletic value, were copied from generation to generation by frequently illiterate craftsmen.

Other seals. The hemispherical stamp seal, perforated horizontally for suspension from the wrist or neck, is of a type whose home was in North Syria. Like the scarabs it is of steatite, here a dark variety, and the antelope device is crudely cut in the soft stone. The seal is not definitely dated and may belong to either the Middle or Late Bronze Age. The form and even the motive resemble seals found in Mesopotamia and dated before 3000 B.C.

CASE 12
Plate III

The cylinder seal, which originated in Mesopotamia, was widespread in the Near East during the Bronze Age. The style suggests that this example came from North Syria and is of Middle Bronze Age date. It is cut out of marble and depicts animals arranged in two horizontal panels. Cylinder seals were usually mounted and worn on the wrist or neck, sometimes too as ring bezels.

All three types of seal were impressed on clay tablets or on pieces of clay attached to cords on papyrus rolls and other valuables. Though usually without writing, their in-

dividualized designs functioned as their owner's signature or as marks of official authority.

Figurines. Pottery female figurines are commonly found in Bronze Age sites. Although these nude figures vary in form, and although their full significance is not yet certain, they probably represent a goddess of human fecundity. Our four Late Bronze Age specimens illustrate differences of style and constant emphasis on sex characteristics. The first, with beak face, triple headdress perforated for ring ornaments, and crude arms raised sidewards, is of a type which came originally from Mesopotamia and which spread to Palestine and Cyprus from North Syria, probably with the Hurrians. The second, with hands pressed together, represents a native Palestinian and Cypriote variant of this type. The third, with human face, spiral locks and arms falling at sides of body, is reminiscent of the Egyptian mother goddess Hathor and shows a fusion of Egyptian and Semitic styles. The fourth, a still more human form, with hair flaring to shoulders and hands cupping breasts, entirely lacks divine attributes and suggests that these figurines were sometimes conceived merely as human concubines. The first figurine was hand-modelled. The second was fashioned hollow by pressing into separate moulds for head and body, then trimming with a tool and adding pieces of clay for arms, breasts, eyes and headdress. The last two were mass-produced plaques made by pressing the clay against a flat mould.

CASE 19
Plate IV

Neighbouring galleries. The products of Bronze Age Palestine should be compared with the contemporaneous material in the Egyptian, Mesopotamian, and Greek Galleries. The sculpture, painting, gem-cutting and metalwork from these other countries must have made a deep impression on the more backward Palestinians. Mesopotamian cylinder seals,

wonderful sculpture in miniature, were seen in Palestine during the whole period. Minoan painted pottery was imported in the Middle Bronze Age; and equally beautiful Egyptian faience, stone vessels, glass, and jewellery flooded the country during the Late Bronze Age, and were well-known to Joseph and Moses. The cheaper products of Egypt are often identical with those of Palestine. The Egyptian sun-dried mud bricks, for example, well illustrate a common Palestinian building material. (Galleries 3 and 6 to 9.)

THE IRON AGE
1200 B.C. - 330 B.C.

Historical. From the modern age of steel we view the earliest use of iron as one of the greatest landmarks of history; but iron came in very gradually and bronze remained the more usual material for tools until the Roman period. The new metal was probably first produced in Asia Minor about 1400 B.C., and there is evidence of its use in Palestine for implements of daily life as early as 1100 B.C.

About 1200 B.C., the accepted date for the beginning of the Iron Age, there occurred events of more immediate significance than the first use of iron. Waves of primitive Indo-European peoples from the north had begun to press into the countries around the Aegean Sea. These invaders destroyed the Hittite empire in Asia Minor, caused the downfall of Mycenaean civilization on the Greek mainland, and crossed the sea to Crete. Thousands of displaced persons, themselves Indo-Europeans from earlier invasions, left the Aegean countries, and some wandered as far as the Mediterranean shore of Egypt. Records of Ramesses III claim a double victory over the immigrant "sea peoples" about 1190 B.C. After their expulsion from Egypt some of these migrating peoples, the Philistines of the Old Testament, settled on the southern coastal plain of Palestine, where two hundred years earlier others from the same northern regions had already come as Egyptian mercenaries.

With the destruction of the Hittite and Mycenaean powers, while Egypt was losing her foothold in Asia, smaller nations began to assert themselves. The Phoenician commercial centres under the leadership of Tyre expanded and became politically independent. The Semitic Aramaeans, with

a language closely related to that of the Phoenicians and Hebrews, immigrated into North Syria and established the Kingdom of Damascus. To the east the Assyrians of Upper Mesopotamia were rapidly creating a great Semitic empire. This was the confused world in which the Hebrews had taken their place as a relatively unimportant and backward nation.

Having begun to press into Palestine from the desert across the Jordan probably as early as 1300 B.C., the Hebrews were able to establish themselves gradually during the following century, first in the hills, and then advancing towards the coast. They were firmly settled in the country and dominating the native Palestinian, or "Canaanite," population when the Philistines arrived. Struggles with the Canaanites and Philistines united the Hebrews and increased their military power. Israel in the north and Judah in the south became a single kingdom ruled by their victorious military leader and owing its independent existence to the decline of Egypt. The Philistines were finally defeated early in the tenth century. Then under Solomon the Hebrews enjoyed a brief period of prosperity and expansion. They maintained their independence while Assyria was gaining supremacy over Mesopotamia, but the rift between Israel and Judah in 930 B.C., and the weakness of Egypt hastened the threatening Assyrian conquest. Samaria, capital of Israel, was captured in 722 B.C. Thousands of influential citizens were deported, and foreign colonists were introduced. Worship of the Hebrew god Yahweh (Jehovah) continued, although the mixed population eventually produced a blend differing somewhat from the rest of the Hebrews in dialect and creed. Judah survived precariously in the midst of the fluctuating struggle between Assyria and Egypt until Jerusalem, its capital, was captured in 586 B.C. by Nebuchadrezzar, king of the New Babylonian Empire, and its leading families were carried off to exile, while many Hebrews fled to Egypt to

join compatriots who had settled there as mercenaries and traders. When Persia succeeded to world domination in the second half of the sixth century B.C., Cyrus allowed the return to Judah of the Hebrew community in Babylon (538 B.C.). Under the mild rule of the new conquerors Palestine enjoyed two hundred years of comparative peace, during which, according to Hebrew tradition, the synagogue and the oral beginnings of the Mishnah were established. In this period the Greeks became commercially powerful and their culture spread into Palestine, where their products were carried inland from the Phoenician maritime centres. About 300 B.C. Palestine was swallowed up in the lightning expansion of Alexander the Great's Macedonian empire. From that time the country was politically and culturally part of the Greek world.

In their struggle to maintain their national identity during the Iron Age the Hebrews endured war, poverty, and foreign domination. They never attained a distinctive material culture. In their arts and crafts they crudely copied the more advanced peoples with whom they came in contact, and the second of the Ten Commandments forbade the representation of human beings. During the Iron Age, however, the Hebrew language developed the characteristics which distinguish it from closely related Palestinian dialects and became the medium of one of the world's greatest literatures. This literature expressed new religious and social concepts which gradually took shape in the course of the nation's troubled history.

Pottery vessels. While the Hebrews were gradually establishing themselves in Palestine, the pottery forms of the Late Bronze Age continued in vogue, although steadily deteriorating. Foreign wares were no longer imported, with the exception of the Cypriote polished red juglets. About the middle of the twelfth century, however, there appeared a

CASES 4, 5, and 15
Plate V

new type of pottery manufactured locally in the Mycenaean tradition and similar to a transitional ware of mixed style found in Cyprus and Greece. This pottery, which is usually decorated with painted designs in red and purple-black, has been attributed to the Philistines. Typical painted "Philistine" pottery is not represented in the Museum.

During the whole of their settled existence in Palestine the Hebrews manufactured pottery similar in form and fabric to that of their neighbours; but from the time of David,

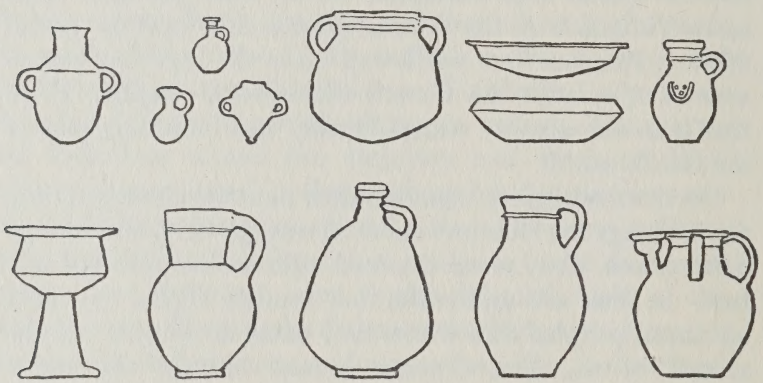


FIG. 8. Common pottery shapes of the Iron Age.

about 1000 B.C., the shapes had degenerated so far from the Bronze Age shapes as to attain a distinctive character. "Philistine" pottery is no longer found. The earlier graceful ovoid outlines become oval or sack-shaped, and clumsy disproportionate forms are usual. The clay was tempered with ground limestone instead of with the powdered quartz formerly used, and was fired at a lower temperature. Decoration is almost entirely lacking, although a high burnish, or polish, produced sometimes by hand and sometimes on a wheel, was often applied over a slip.

Jugs with lips pinched to form a trefoil spout are seldom found after the tenth century. The one-handled jug with

strainer side-spout is a form borrowed from the Philistines but surviving them for at least two centuries. The jugs with low tubular spout, including the grotesque example in the form of a woman, are not earlier than the ninth century. Their form strongly suggests that they were used as infants' feeding bottles. The locally manufactured miniature jugs, at first red and later black, imitate the red polished imported Cypriote juglets and with slight changes of form were used through the whole of the Iron Age for oil or perfume. The small vases with round or pointed bases and two handles below the shoulder were also used as containers for more precious liquids, and represent an equally persistent form surviving from the Late Bronze Age. The wide-mouthed jugs, common at all periods, were used as decanters for water and wine; and the smaller wide-mouthed jugs often served as drinking cups, as also the small handleless bowls. The pilgrim flask continued in use through the Iron Age and was particularly popular about the tenth century. Dishes and low open bowls were common tableware at all periods. From the ninth to the sixth century they were usually provided with a thick red slip and were skilfully burnished on a wheel. The examples with flanged rim and sharply profiled body are particularly characteristic of this period. Of the ninth century or later are the one-handled small-mouthed bottle-shaped containers; the fragment of a large three-handled oil jar with vertical spout; the large round food pot with four studs below the rim; the one-handled food bowls; the more formal bowls on a tall pedestal, descendants of a Bronze Age form and popular until the end of the eighth century; the hand-modelled and painted dish in the form of a boat, a type widespread over Mediterranean regions; the animal jar to contain liquids, with body wheel-made and head and feet modelled by hand; and probably also the rough two-handled vessel with flanged rim, which may have served as a grain scoop. Large jars, such as the four-

handled specimen, were used at all periods for storing grain, oil, and wine, and Bronze Age forms of this indispensable household vessel remained in vogue during the Iron Age. The two-handled round-bottomed cooking pots scarcely changed their shape at all from their first appearance in the Late Bronze Age; and the low cylindrical pot-stand is an example of a device used at all periods to support round-bottomed vessels.

CASE 15
Plate IX

The Iron Age lamps, like those of the Bronze Age, are simple open bowls to contain olive oil, with their rim pinched to form a support for a fibre wick. The Bronze Age examples, which sometimes held more than one wick, have simple rims, but from the twelfth to the tenth century the rim became more sharply pinched and developed a distinct flange. During the ninth century the lamp was provided for the first time with a low foot. In the fifth or fourth century this type was gradually superseded by the small lamp with flangeless rim folded inward to form a spout.

Scarcely any of this pottery can be identified with particular vessels mentioned in the Old Testament, since such common objects seldom needed to be described. The written context and the Hebrew names for the vessels, however, furnish clues which have led to the following suggestions:

The red polished juglet of Cypriote type is the "vial of oil" for anointing the king (I Sam. 10:1; II Kings 9:1). The small wide-mouthed jugs are the "pots full of wine" (Jer. 35:5). The small handleless bowls are the cups mentioned in the same passage and frequently elsewhere. The pilgrim flask is the "cruse of water" taken by David from Saul's camp (I Sam. 26:11, 16); it is also that found miraculously by Elijah in the wilderness (I Kings 19:6) and the widow's "cruse of oil" (I Kings 17:12, 14, 16). The one-handled small-mouthed container is the "potter's earthen bottle" (Jer. 19:1, 10), and also the "cruse of honey" of I Kings 14:3. The three-

handled oil jar with vertical spout is the widow's "pot of oil" of II Kings 4:2. The two-handled cooking pot is the "pot of pottage" of II Kings 4:39. Whenever lamps are mentioned in the Old Testament, as in Ps. 119:105 and Prov. 13:9, they must be visualized as the open bowl type used during the Iron Age.

Other objects of daily use. The black glass spindle whorl and the pottery loom weight illustrate spinning and weaving. Wool, goat's hair, and flax were used for making cloth in ancient Palestine (Job 31:20, Exod. 26:7, Hos. 2:9, Prov. 31:13). The conical form of spindle whorl was common in both the Bronze Age and the early Iron Age.* The whorl was simply a weight to make the spindle twirl more easily, with a hole to receive the wooden spindle shaft. Spherical loom weights of the Iron Age have frequently been found. Although no looms have survived, these weights were probably used with a variety of the two-beam horizontal loom (see also p. 88). The warp threads would have been carried diagonally upward around two rollers and kept taut by the weights. Weights were not required for the simple horizontal loom into which Delilah wove Samson's seven locks (Judg. 16:13). *CASE 14* *Plate V*

Vessels for preparing and containing cosmetics were used at all periods, but the saucer-like stone cosmetic pallette for grinding eye-paint is a form typical of Iron-Age Palestine from about the ninth to sixth century (II Kings 9:30, Jer. 4:30, Ezek. 23:40). The drilled concentric circles decorating its rim were inlaid with a blue frit, traces of which are still visible. The fine quality of limestone out of which most of these pallettes were cut does not occur in the Hebrew domain and suggests that they were imported from Phoenicia.

*This whorl is probably Hellenistic on account of the material but can be more conveniently mentioned under this heading. It illustrates a shape which was known before, during, and after the Iron Age.

CASES 5 and 19 Plate VI

Figurines. The bronze figurine with cap, short kilt, and raised right arm is a warrior god whose home was originally in North Syria.* It is of debased design and workmanship, cast by the "lost wax" process (see p. 55) and then roughly hand-tooled into its final form. Although the type is known as early as the Hyksos period it is most commonly found in the Early Iron Age, the period to which the Museum's specimen probably belongs. Its stance and costume were sometimes influenced by Egypt, and it was worshipped under many different names. To give it the name of any particular god is seldom possible, since the distinguishing weapons or attributes which it carries scarcely ever survive. Many of the Canaanite gods against whom the Hebrew prophets campaigned were represented in this form (II Kings 17:12, Mic. 1:7, II Chron. 28:2, etc.).

Plate IV

The plaque form of the fertility goddess, common in the Bronze Age (p. 17), survived into the early Iron Age. At the beginning of the Hebrew kingdom, however, it gave way to the rounded "pillar" type which remained popular during the period of Hebrew independence. The Hebrews at first worshipped many deities. Their chief god Yahweh may originally have had a consort, and like their Canaanite neighbours they worshipped the goddess Ashtoreth (I Kings

*GA. 2445. Purchased from Vester, Jerusalem, in 1936. The figure belongs to a well-known class, but the following parallels should be quoted for the peculiarities of its extremely debased form; the crude technique, especially the perforated "hand"; the arm joins; the outline of the "ears," the nose, and mouth; and the "cut off" legs: Przeworski, *Die Metallindustrie Anatoliens,* 1939, pl. 15 no. 2; also Przeworski *Arch. Or.* 7, 1935, 396 ff. pls. 48, 51. Bates *A. J. A.* 1911, 14 ff., (arm joins); V. Müller, *Frühe Plastik in Gr. u. Vorderas.,* 1929, nos. 289, 388, 393, 401, 403, 411 etc. For the technique of nipping off the ends of the legs, which were used as pouring gates in casting, see Przeworski, *Die Metallindustrie,* 117, and cf. especially an unpublished figurine from Luristan in the Royal Ontario Museum of Archaeology (D. 1468) showing identical technique. The well-known Luristan "talismans" are remarkably similar in certain details of form and technique. Mr. Wm. Todd, preparator of the Museum, examined the object before cleaning it in 1938, and states that the antiquity of the surfaces was unquestionable.

11:5). But as Yahwism developed a tendency towards monotheism and the public worship of other deities was forbidden, the female figurines were reduced gradually from the rank of goddess to the level of household amulets, and persisted in the home in this "pillar" form until the Roman period. Pillar figurines were manufactured by pressing the clay into two separate moulds, one for the head and the other for the body, the former having a peg to be inserted into the neck.

Hand modelled pottery animals, such as the horse and rider and the two similar riderless animals, were common in Syria and Palestine in the eighth and seventh centuries. It is not definitely known whether they were intended for religious or secular use, but they were probably toys in many cases. The spool-shaped pottery rattles of the same period are to be considered as religious ceremonial objects rather than toys. Small bronze animals, such as our two examples which are perhaps of earlier date, were manufactured in large quantities as votive offerings. *Plate VI* *Plate V* *Plate VI*

Seals. The stone seals of plain oval form were common in the period of the United Monarchy (tenth century B.C.). They are related to the scarabs but represent a more perfect fusion of Egyptian and Syrian styles; and one, the carnelian seal with two horned animals, suggests Aegean influence. Like the cylinder seals and scarabs, they could be worn suspended from the neck or at the wrist (Song of Sol. 8:6) or as the bezel of a finger-ring (Jer. 22:24). Their designs depict men, birds, and animals, and have no writing. The type was the precursor of the eighth- to sixth-century type of oval seal which often contains the owner's name written in Old Hebrew letters. *CASE 12* *Plate III*

The development of writing. The history of Palestinian alphabetic scripts is illustrated by a small display consisting *CASE 12*

largely of photographs but containing a few objects from the Museum's collection. Writing from the Middle Bronze Age to the Roman period is shown. It is best, however, to describe the whole series at once under the Iron Age, the period in which the Hebrews evolved their own distinctive handwriting and in which the Greeks borrowed theirs from the Phoenician variant.

The earliest known scripts, Mesopotamian and Egyptian, began towards the end of the fourth millennium as separate systems of picture writing. Each rapidly developed phonetic values for its signs, and more slowly adapted the visible forms to their writing tools. In Mesopotamia the characters assumed the form of the wedge-shaped stylus used on the clay tablet. In Egypt the brush on papyrus led to the development of a cursive handwriting, although the original picture form long continued to be used in cut stone and decoration. Neither Mesopotamia nor Egypt, however, evolved a completely alphabetic script. Both peoples continued to use signs with sense values and each phonetic sign usually represented more than one sound (in Egyptian script some alphabetic, or "single sound" signs were used, in Mesopotamian script none). Such writing systems involved hundreds of characters, were difficult to learn, and cumbersome to use. The earliest known purely alphabetic script is perhaps that found in a series of crude rock tablets from Serabit el-Khadem, Sinai, an ancient Egyptian mining colony where Semites were employed. This script is usually dated to about the seventeenth century B.C.* The characters are like the Egyptian picture signs but all have new alphabetic values derived from the first sound in a Semitic word for the picture. Several undeciphered inscriptions attributed to the first half of the second millennium B.C. have been found in Palestine and Syria and are apparently related to the Sinai inscriptions.

*A somewhat later date (early fifteenth century) has been proposed as this goes to press. See W. F. Albright *B.A.S.O.R.* April 1948, 6 ff.

The faience bracelet with an inscription in Egyptian hieroglyphs is from Serabit el-Khadem, and although of later date (fourteenth to thirteenth century B.C.), is shown as an example of picture signs similar to those borrowed for the alphabetic script. The bracelet was found in the temple of Hathor, where it had been left by a devotee as a customary offering and is inscribed to "Hathor, mistress of the turquoise." The unchanging hieroglyphs, the legend, and the form of offering, were all familiar to the Sinai miners of the seventeenth century B.C.

A long series of inscriptions from Palestine, Syria, and Transjordan suggests that the alphabetic script from Sinai or a related system gradually developed into the North Semitic script of about 1300 B.C. which later became the standardized Phoenician and Hebrew writing of the first millennium B.C. This series is illustrated in the gallery by photographs of inscriptions spaced at intervals of scarcely more than a century, and covering the period between the seventeenth and the sixth century B.C.

While the Canaanite-Phoenician alphabet was gradually taking shape in the second millennium, other experiments in writing systems were being made (finds at Gebal, ancient Byblos, and Ras Shamra, ancient Ugarit, in Syria, and Baluah in Transjordan). Some of these still undeciphered scripts seem related to Egyptian hieroglyphic and others to Mesopotamian cuneiform, and some may be earlier than the Sinai inscriptions. By far the most important rival of the Canaanite-Phoenician script is the cuneiform alphabetic script discovered at Ras Shamra. This script was standardized as early as the sixteenth to fourteenth centuries, the heyday of the city's commercial power. It has been completely deciphered, and both the language and the thought have proved closely related to the later literature of the Hebrews. A specimen of the Ras Shamra script has been found at Ain Shems in Palestine.

Although far excelling all other writing mediums in dura-

bility, the cuneiform clay tablet could not compete commercially with the faster linear writing of a fine brush on more conveniently handled grounds. Cuneiform gradually declined while the Canaanite-Phoenician writing spread and developed into new forms which are the direct ancestors of scripts still in use today. A Hebrew style of writing using the same alphabet became distinct from Phoenician early in the first millennium B.C.

Many seals carrying inscriptions in Old Hebrew writing have been found and are attributed to the period between 800 and 500 B.C. They are important material for the study of the script. One of the best known, and a typical representative of its class, is an oval jasper seal found at Megiddo. It has a beautifully engraved lion whose naturalistic style suggests Syrian influence, and is inscribed "Shema the servant of Jeroboam" (illustrated by a cast). Dated to the eighth century on stylistic grounds, the seal most probably refers to Jeroboam II of Israel. It should be studied in conjunction with the photographs of early Hebrew inscriptions. Its place in the series is between the inscribed potsherds from Samaria (ninth to eighth century) and the Lachish letters of the time of the Babylonian invasion (early sixth century).

Not later than the eighth century the Greeks borrowed the Phoenician alphabet, through trade contacts, and developed their own version of it with the addition of vowels. This alphabet was adopted by the Romans, who again altered the shapes of the letters slightly and passed it on to Western Europe. The stamped handle from an imported Rhodian wine jar of the second century B.C. (see page 37) is an example of the later Greek script familiar in Palestine. The vulgar Greek of this period was used for the Septuagint, the first Greek version of the Old Testament. The writers of the New Testament also used it, in practically unchanged form. The jar handle stamp, which reads "in the magistracy of Athanodotos, month of Thesmophorion," may be compared with the photograph of the eighth-century Greek vase in-

scription and with the photographs of the still earlier Canaanite-Phoenician scripts.

Competing with the many dialects used in Palestine and Syria during the Iron Age, the language of the Aramaeans had gradually become the general language of commerce and daily life. Closely related to Hebrew, it used a script of its own, which was descended from the common ancestor, Canaanite-Phoenician. Towards the end of the sixth century B.C., about the time of the return from the Exile, the Hebrews began to use the Aramaic alphabet. They still, however, used the Old Hebrew letter forms for traditional purposes. Examples of the survival of Old Hebrew script are the inscriptions on Jewish coins, such as the bronze coin of the Maccabean, John Hyrcanus (135-104 B.C.), with the legend "Johanan the high priest and the senate of the Jews," the coin of the First Revolt (A.D. 66-70) with legend "Half-shekel, year 2, Jerusalem the Holy," and even the coin of Bar-Kokhba of the Second Revolt (A.D. 132-135) with legend "Simon Prince of Israel, first year of the redemption of Israel." Not long after they began to use Aramaic in post-Exilic times, the Hebrews, from then on more often called Jews (i.e. men of Judah), copied their sacred books in the new script. About A.D. 500 the Jewish traditional literature became rigidly formalized in the "square" letters which Aramaic had developed and which survive practically unchanged as the Hebrew letters of modern times. Aramaic of about the fifth century A.D. is illustrated by the inscription on an incantation bowl, probably Jewish, containing spells to protect the house of Babai, the son of Mahlaphta, from certain demons.

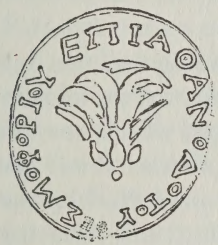


FIG. 9. Rhodian jar-handle stamp. Length 6.4 cm. (2½ ins.).

At this period a small community at Samaria was speaking its own variant of the Aramaic dialect and was still using an archaic alphabet derived from the Old Hebrew.

The Samaritans, with a basically Hebrew strain, were descendants of the mixed population created by the Assyrians in the eighth century B.C. and worshipped Yahweh according to their own separate creed. Though slowly dwindling in numbers they have remained distinct in race and religion until the present, and have continued to write their own copies of the Pentateuch in the old alphabet.

Neighbouring galleries. Spinning and weaving in Iron Age Palestine can be better visualized after studying the closely similar textile industry of Bronze Age Egypt, which has left a far clearer picture. In the Egyptian galleries there are specimens of fine linen cloth, miraculously preserved by the dry climate, and reproductions of spinning and weaving scenes from ancient tomb paintings (Gallery 6).

Writing materials and implements similar to those used in Iron Age Palestine may be seen in the Egyptian and Mesopotamian galleries (Galleries 6 and 10). Papyrus is of particular importance since the Palestinians commonly used it as the writing ground for their native scripts, although this perishable material has scarcely survived outside of Egypt.

Two remarkable works of art from Mesopotamia (Gallery 10) are linked with Hebrew history. The first is an alabaster relief sculpture from the palace of the Assyrian king Assur-nasir-pal, at Nimrud. Under this king, who reigned early in the ninth century, Assyria began her westward advance toward Syria and Palestine. The sculpture represents two priests of the god Assur performing a ceremony before the sacred tree, and carries the king's titles and epithets in cuneiform writing. The other piece is a winged lion in glazed earthenware bricks from Babylon. It was one of a magnificent series of such lions decorating the street leading to Nebuchadrezzar's palace at the time of the Hebrew Babylonian Exile.

THE HELLENISTIC, ROMAN, AND BYZANTINE PERIODS

330 B.C. — A.D. 638

Historical. The conquests of Alexander the Great brought Palestine into a cosmopolitan world dominated by the Greek culture to which she had already been introduced by Greek traders and mercenaries during the two previous centuries. The new era, known as the Hellenistic period, saw the rise of Greek cities throughout the Near East. Macedonian veterans of Alexander's wars were among the earliest Greeks to settle permanently in Palestine, and from the beginning of the third century B.C. there spread rapidly over the country a network of well-planned towns with commerce and administration controlled by Greeks and Hellenized natives. After the division of Alexander's empire in 301 B.C. the Greek-ruled kingdoms of Egypt and Syria contended for Palestine. The Ptolemies of Egypt possessed it until it passed into the hands of the Seleucids of Syria in 198 B.C. Under Alexander the Great and the Ptolemies the Jews had been granted certain privileges, and a Jewish community grew and flourished in Alexandria, the newly-founded capital and Mediterranean seaport of Egypt. This was the most important Jewish centre outside of Palestine, but there were others: for example, in Rome, Ephesus, Babylon, and the commercially important Aegean island of Delos. Subjected to foreign rule in Palestine and scattered through the countries of the Graeco-Roman world, the Jews were developing a consciousness of religious rather than political unity. While Jerusalem remained their spiritual home, Alexandrian Jews, Greek-speaking and westernized, were becoming more influential in the international world of commerce and letters than their Palestinian kinsmen.

Constant warfare with the other great Hellenistic powers and internal corruption had weakened Syria, so that several small kingdoms were able to break loose during the third century B.C., and the Parthians, a North Persian tribe, gathered strength to form a new Persian empire. During the second century B.C. the island of Rhodes, strategically situated at the eastern approach to the Aegean Sea, was a powerful maritime state competing with Syrian commerce. In the west, Rome was already looming as the next world empire. In Syria, international insecurity and economic stress were accompanied by social unrest and religious persecution.

These were the general conditions when, in 167 B.C., the Jews rebelled against the Seleucid kings. Leaders of the revolt were the Maccabees, a family of priests whose descendants, from 105 B.C., styled themselves kings. A thirty-year struggle ended in partial independence, while hatred of the foreign rulers now prompted an unsuccessful attempt to establish a distinctive Jewish culture. In 63 B.C. family quarrels over the succession, in which the orthodox "Pharisees" and the dissenting "Sadducees" took sides, resulted in Roman intervention. In 40 B.C. the Roman puppet, Herod the Great, deposed Hyrcanus, the last Maccabean prince, and became dependent king of Judaea under Rome. In the seventh year of the Christian era nearly all Judaea was incorporated in the Roman province of Syria. From A.D. 41 to 44 it was again a dependent kingdom ruled by the Herodian Agrippa I, and then reverted once more to direct Roman control. A Jewish revolt that broke out in A.D. 66 ended four years later in the destruction of Jerusalem by Titus. The Jews again rebelled in A.D. 132 after the emperor Hadrian had founded the Roman colony Aelia Capitolina on the site of Jerusalem, but were finally crushed in A.D. 135. The majority of those who escaped massacre fled to other countries but many remained behind. Galilee now became

the centre of a relatively prosperous and peaceful Jewish population until the Arab conquest, and the Mishnah and the Jerusalem Talmud were written there before the fifth century. Remains of several Galilean synagogues of the second to sixth century prove that the Jews of the period were skilful exponents of current architectural styles and interpreted the second Commandment as permitting the use of animals and even of humans in decoration.

At the beginning of the Christian era the Roman empire embraced the entire Mediterranean. Its vast organization, with new local administration centres planned on a lavish scale, brought fresh Western contacts to Palestine. Egypt, now a Roman possession, and the chief food producer for an industrialized world, retained close cultural ties with Palestine and Syria. The Nabataeans of South Palestine and Transjordan, descendants of Arabian nomads who had invaded southeast Palestine in the sixth or fifth century B.C., had a semi-independent status under Rome until A.D. 105. They assimilated Graeco-Roman civilization and evolved a highly organized state largely based on control of the caravan routes. At the time of Christ they were at the height of their prosperity, and their distinctive culture influenced Judaean life and politics. To the east the Parthian rulers resisted Rome and were succeeded in A.D. 226 by the Persian dynasty of the Sasanians. Stimulated by the spread of Greek civilization, Sasanian Persia gradually evolved a new oriental culture which later in its turn deeply affected the West.

The Christian church grew in an atmosphere of oriental mysticism blended with Greek philosophy. Little is known about its early development in Palestine, beyond what is written in the Acts of the Apostles, from which we learn that it early became established in Antioch. Later it flourished in Alexandria, the great centre of contact between East and West. There the new faith, stimulated from both directions, was easily communicated to the world through

the medium of the Greek language. At the same time other ancient religions were being transformed by the same fusion of Eastern and Western thought, and gods of mingling nations were assuming hybrid forms. New "mystery" religions thus arose, but Christianity outstripped them all.

Until towards the middle of the third century the Roman emperors tolerated Christianity; but when finally the church assumed the proportions of a strong organization within the state, it became a threat to the weakening power of the central government, particularly within the ranks of the army, and systematic persecution followed. The struggle ended, however, in the triumph of Christianity, when in 313 the emperor Constantine recognized it as an official state religion. When the empire was divided after the death of Constantine, Palestine became part of the Eastern or Byzantine empire. During the fifth and sixth centuries, while Roman civilization was declining, Christianity flourished. Sasanian Persia, moreover, was then at the height of vigor and through her influence a new oriental mood revitalized the arts of the Byzantine Near East, including Palestine, until in A.D. 638 the Arab conquest obliterated Roman civilization.

During the Hellenistic period Western culture had been chiefly confined to the ruling classes, who long retained it in a pure form. During the Roman period, however, it became corrupted and finally assimilated by the mass of the native population. The Roman period is more plentifully represented in the Museum's Palestinian Gallery than are any of the preceding periods. For the study of Christian and Jewish history this is not amiss, since both the New Testament and the Palestinian Talmud were written under Roman rule.

CASES 6, 7, and 15
Plates VII and VIII

Pottery vessels. The older shapes of common Palestinian pottery continued through the Hellenistic and Roman periods, with little change in the composition or in the

quality of the fabric, while newly introduced shapes appeared as well. Greek influence on native wares was noticeable as early as the fifth century B.C., gradually increasing both before and after the conquests of Alexander the Great. The pilgrim bottle, represented here by an unusually large example, remained in general use. The two-handled vase, or amphora, became narrower with a more pointed base, and large storage and water jars underwent a similar change. The two-handled cooking pot tended to be rounder and deeper, but a shallow form was also used. Some locally manufactured vessels for special use, such as the small globular scent bottles, and the open-mouthed juglets or cups, are of finer fabric. Sometimes metal forms inspired these better vessels: for example, the late Hellenistic small black cup with convex fluting on its base; it was made in two pieces, the lower cast in a mould and the upper wheel-made. The long-necked handleless unguent bottles are not a local product, but were widely exported from an unidentified centre probably in the Near East. From their earliest appearance in the fourth century B.C. they were spindle-shaped, but they became bulbous in early Roman times. The carinated wine pitcher with spirally twisted handle is a local product of the second century B.C., but the form was at that time widespread in Mediterranean countries. The two Greek oil flasks, or *lekythoi,* were imported from Athens during the fourth century B.C. Indicative of still earlier connections with Greece is a disk base broken off a Greek *lekythos* and used to seal a small two-handled pot of native manufacture. Both pot and improvised cover are of fifth century form. The stamped handle of a Rhodian wine jar, already mentioned in the section on writing (p. 30), illustrates the common occurrence of such jars during the second century B.C., when Rhodes enjoyed an immense export trade in wine. The miniature amphora of thin black fabric was imported in the second or first century B.C., probably from the Aegean

area. The relief decoration on its neck is clay applied as a paste, a technique known as barbotine, and rarely found in the Near East, although common in the western Graeco-Roman world. The two low closed vessels with horizontal tubular spout and loop handle are infants' feeding bottles; similar vessels have been found in children's graves and with tooth marks on the spout. Both these examples, though of Greek design, were probably made in Palestine. The first, which may be as early as the third century B.C., was shaped on the wheel in a single piece, including its high foot. The second, which belongs to the first or second century A.D., was made in two separate horizontal moulds. The spout forms the snout of an animal (dog?), the rest of whose head is modelled in very flat relief on the sides of the vessel.

The native pottery of the Roman and Byzantine periods became generally heavier and clumsier and the coarse reddish ribbed ware is characteristic. Cooking pots of the period, scarcely distinguishable in shape from earlier examples, can often be identified by this ribbing. Other specimens of the ware are the shapeless open-mouthed jugs, the jug with strainer top and small tubular spout, and the sack-shaped two-handled storage jar. The drab bulbous jug with short narrow neck, ring base, and two bands of plain comb decoration is an example of a finer ware of late Roman or Byzantine times.

Nabataean pottery is represented by sherds of the characteristic fine thin red ware with grayish purple painted decoration in flowers, vine and geometric patterns, and also by a single sherd of similar fabric decorated with rouletted strokes. The painted pottery, few complete specimens of which have survived, was made during the two centuries before and after the birth of Christ. It is highly individual but in the Hellenistic tradition and illustrates the genius of these former Arabian nomads for assimilating culture. Our

examples came from Petra, their famous rock-hewn capital.

The glossy bright red ware is imported "terra sigillata," the finest Roman pottery, which reached its zenith during the Augustan period (beginning of the Christian era). It was manufactured at various centres in the eastern Mediterranean region, as well as in Italy. Of this ware the large narrow-necked jug, the slender two-handled vase with incised decoration on the shoulder, and the squat two-handled vase were all probably made in the Aegean area during the second century A.D. The free all-over pattern on the squat vase was produced by wiping the slip while wet. The small bottle, of about the same period, is a local variant of the ware, perhaps from further east. The large plate, also terra sigillata, belongs to the third century A.D., and is an outstanding specimen of the best tableware of its period. Other examples of fine imported pottery of the early Roman period are the two-handled pedestalled cup with carefully sanded surface, the smooth-surfaced miniature two-handled cup of similar delicate fabric; both belong to the first century A.D., and the Aegean region is their probable source.

The two small pilgrim flasks are fifth or sixth century A.D. They were shaped in two separate moulds which also produced their crude decoration in relief. One of these flasks shows a mask flanked on each side by a peacock and tree, common motifs in early Christian art. The peacock first appeared in pagan art as the sacred bird of the Roman goddess, Juno. It was used by the cult of Dionysos as the symbol of immortality, and later the Christians adopted it with the same meaning. (St. Augustine describes its flesh as incorruptible.) The tree as the symbol of life has a still longer history; it figures prominently in the worship of the Assyrian national god Assur, and its survival in Christianity signifies "The Tree of Life, which is in the midst of the paradise of God" (Rev. 2:7). The other flask carries on each

side a Greek inscription, carelessly executed by an illiterate craftsman. On one side the inscription reads "Lord have mercy"; the other side so far remains unintelligible.*
Each side also shows a tree, a Greek cross, three arches representing a sanctuary, and a dove symbolizing the Holy Ghost(?). The arcaded sanctuary was common to Christian, Jewish, and pagan art (see also pp. 42 and 54), and the dove was known in pagan iconography as the sacred bird of

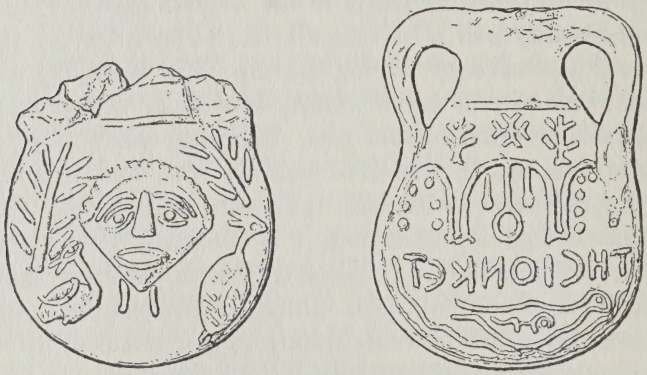


FIG. 10. Pilgrim flasks. Width 7.3 cm. (2⅞ ins.).

Aphrodite and Astarte. The form and decoration of these vessels assign them to the well-known class of flasks which contained oil, water, or earth brought by Christian pilgrims from sacred places, particularly the tomb of the Egyptian saint Menas at Alexandria.

Plates IX and X

A new type of lamp which was introduced from Greece in the Hellenistic period rapidly replaced the shallow open lamp. Like its predecessor it burned olive oil fed through a fibre wick. The first step towards the new form was a circular wheel-made lamp, of the fourth or third century B.C., with rim decidedly incurved to prevent the oil from

*A flask with similar design and inscription and possibly from the same mould is described in the *British Museum Catalogue of Early Christian Antiquities*, 1901, no. 909, 158.

spilling and with the spout bridged to form a nozzle with a wick-hole. The incurved rim gradually covered the top of the vessel except for a central filling hole, and a handle opposite the nozzle and a low foot were sometimes added. Lamps were wheel-made until about 200 B.C., but from then on the upper and lower halves were usually formed in two separate moulds. The filling hole then became still smaller and moulded designs appeared on the upper surface. The Greek form of moulded lamp, which long persisted in the Near East, has a convex upper surface and a long nozzle. At the beginning of the Christian era there also appeared in Palestine a Roman form, with a short, usually rounded nozzle and a sunk upper surface, almost completely closed. Both the Greek and Roman lamps were sometimes imported but the great majority were manufactured in Palestine where the two types tended to fuse and produce distinct variations. After the third century A.D. the lamps gradually degenerated; the filling hole grew larger again; the decoration coarsened and handles became clumsy and usually solid. Beginning probably in the fourth century, there developed in the Near East a distinctively Byzantine pear-shaped or shoe-shaped variety, with simple linear decoration usually including a crude straight-branched tree. A common feature of this lamp, particularly in the sixth century and later, is a channel between the filling hole and the wick-hole. Although the Byzantine type of lamp survived the Arab conquest, the process of degeneration accelerated in the seventh century and the lamp tended to revert to its earliest form, a simple bowl or saucer with pinched rim.

Lamps with several wicks burned more oil but gave a much brighter light. The large ring-shaped lamp which originally had thirteen nozzles was imported from Greece during the late Hellenistic period; the tubular ring which contained its oil was folded into shape and the hand-modelled nozzles, filling funnel and loop handle were then

added; marks both on the exterior and on the hollow interior suggest that the walls of the ring were wheel-made. The globular lamp with two slightly splayed nozzles is a local imitation of the same ware; the ware, which was sometimes wheel-made and sometimes moulded, appears in both single and many-wicked forms. The lamp with sunk upper surface, triangular "shield" and seven nozzles evenly spaced around the diameter is probably of the first to the third century A.D. A late survival of this type of polycandelon is seen in the five-nozzled example (Arab, seventh century or later). The lamps with several wick-holes in a single large square nozzle were popular in the second and third centuries A.D.; it has been suggested that the Jewish eight-wicked Hanukkah lamp first appeared during the Roman period in this form. In the Iron Age open seven-wicked lamps had occurred as a standardized form of polycandelon, but the Museum's seven-wicked lamps are unlikely to have had special meaning in Jewish ritual. Single-wicked lamps were sometimes grouped to serve as polycandela, and relief sculptures show that in Roman times the Jewish seven-branched candlestick carried small clay or metal single-wicked lamps.

The moulded decoration on the lamps of Roman and Byzantine times shows a number of motifs and designs typical of their period: The shell, the vine, and the numerous volute, interlacing, zig-zag, rosette, and beaded designs are purely decorative. Religious symbols sometimes occur, such as the seven-branched candlestick (with shofar and altar?), the sanctuary with arcade, the palm tree and, from the fifth century on, the cross and the Christian inscription in Greek (our example reads "of the Virgin"). The two-handled cup, particularly common in Palestinian and Syrian ornament, and the Byzantine bearded head and animals and birds (lambs and doves?) are probably also symbols. The swastika, prominently featured on the nozzle of one of our lamps, is probably here conceived as a symbol. Although some of these

symbols, such as the seven-branched candlestick and the cross, were associated with specific sacred persons or objects, others were used by more than one religion and with vaguer significance.

Graeco-Roman pottery lamps, such as the closed lamps on plates IX and X, are to be pictured for the parable of the wise and foolish virgins (Matt. 25:1-12) and for the passages in which lamps are mentioned in the Talmud (e.g. Shab. 22; Men. 86b).

Bronze vessels. While pottery was used by rich and poor alike, only the well-to-do could afford many metal vessels. Luxury products of Roman times followed cosmopolitan patterns and it is difficult to say in what centres our Palestinian bronze vessels were manufactured. None of them is earlier than the Roman period, although copper and bronze vessels had been first used in the Bronze Age.

CASE 9
Plate XI

The bodies of the vessels were usually hammered into shape out of sheet metal but many of them, including all the lamps, were cast. Both hammered and cast specimens were sometimes finished and polished on a lathe, which first became generally used in metal working during the Roman period. The handles were cast separately; much of their ornamental detail was finished by engraving, and they were soldered, or occasionally riveted, on the vessel.

Pails or "situlae," such as the two examples with swinging handles and low base rings, were standard ritual vessels in Roman times but were also used in daily life for drawing and carrying water; the larger and more elaborate of these pails has moulded handle attachments in the form of Dionysos masks. Typical examples of household vessels are the squat amphora with double rope design on the handles; the two jugs with arched handles terminating in masks; the round-bottomed bowl; the pedestalled wine cup, originally two-handled; and the less pretentious straight-sided cups.

The small-necked bulbous or ovoid vases with heavily moulded mouth were probably used for unguent or perfume. The unidentified platelet (lid or miniature mirror?), with concentric moulded circles, punched openwork decoration on the edge and swinging handle, deserves mention for its design and technique.

Handles, some of which are interesting examples of ornamental casting, have survived in far greater numbers than have complete vessels. Two may easily be identified as jug handles, one having the same slender arms to embrace the rim seen on the two complete jugs. The swinging handles belonged to pails. The long straight handle came from a flat surface, probably the lid of a toilet jar. All these handles, or their attachments, have moulded decoration with masks, leaf forms, palmettes and other ornamental motifs.

Plate XI

The bronze lamps are more varied in shape than the pottery lamps and usually have longer nozzles. Most of our examples are of Byzantine date. Sometimes they were designed for suspension, like the shallow eagle-shaped Christian lamp with open wick trough,* and like the lamp with swinging handle attached to a long hook (provided also with a small lifting handle to which the lid was chained). Sometimes they were designed for attachment to a stand, like the large heavy two-nozzled lamp and the lamp in the form of a dolphin carrying a cross, both of which are provided with sockets in the base. Others, however, were portable and free-standing, like the small short-nozzled lamp with crescent shield and the small long-nozzled lamp with tree-shaped shield and hinged lid in the form of a shell. Two of these lamps—the hook lamp and the last mentioned specimen—are provided with a loop to attach a pick-wick.

*Cf. *Br. Mus. Cat. Early Chr. Ant.*, 1901, 527, called "lamp filler," and Kraeling, *Gerasa*, 1940, 138, pl. 28a, Christian lamp mould with bird in design representing the baptism of Jesus. The two projections on each wing were apparently designed as attachments for a chain but are not perforated (unfinished?).

The stand with long stem and tripod base with hooves is a form commonly used to suspend chained lamps on projecting spikes and also to carry single lamps and small censers.

Glass Vessels. The earliest known glass vessels were produced in Egypt about the middle of the second millennium B.C. From that time until the invention of glass blowing they were made by winding semi-molten glass rods around a temporary sandy core and then re-heating the glass to coalesce it. The polychrome decoration was formed by applying glass threads of different mineral colours to the surface, often in a wavy pattern produced by dragging them up and down. Small vessels resembling the brilliant glass of the fifteenth and fourteenth centuries B.C., but of inferior design and technique, were made in this way during Persian and Hellenistic times. Probably manufactured in Egypt expressly for the perfume trade, they have been found in many eastern Mediterranean countries including Palestine. Our slender bottle with yellow and blue-green wavy lines on a dark blue ground is typical of the fifth or fourth century B.C.

CASE 9
Plate XIII

Glass blowing was probably invented in Syria in the first century B.C., but first became an important industry in Alexandria. The new technique made it possible to increase the size of the vessels, to create a greater variety of shapes, and to manufacture them cheaply in large quantities. Glass vessels containing wine, oil, and perfumes for export were shipped all over the Roman world, and gradually other countries learned to make them. Our specimens of blown glass found in Palestine were probably all made either in Alexandria or in Syria. Colourless glass was first produced in the second century A.D. by adding manganese to neutralize the green caused by the natural occurrence of iron. Vessels of plain coloured glass came into vogue in the third century A.D.; yellow and purple were produced by adding different quantities of manganese, and blue by adding copper or cobalt.

The large dish, probably third century A.D., seems to have been blown against a mould, although at the time when glass blowing first appeared bowls were often made by hand-pressing a sheet of glass against a mould. The square bottle, also an early form, was blown into a mould. The blue two-handled vase with flanged rim and the pale yellow four-sided flask with hand-pressed hollows on each side and applied blobs at the angles were freely blown, but the golden brown bottle in the form of a date was mould blown; all three are probably of the third or fourth century. Probably a century or two later is the freely blown long-necked bottle with applied decoration of dark brown glass threads.

CASES 9, 10 and 14 Plate XV

Costume accessories and jewellery. Early in the Iron Age the perforated straight garment pin (p. 15) was succeeded by the brooch or fibula. In the Near East the latter consisted of a bar bent outward into an arched or occasionally angular shape, with a pin moving on a spring or hinge and fitting into a catch in the bar. Our two gilded bronze fibulae from Palestine, however, belong to an Italian type that has been found in tombs of the third, fourth and fifth centuries at Jerusalem. These "crossbow" fibulae, which are characterized by a cross-piece at the hinge, a short bow, and a flat section forming the catch, were probably brought to Palestine by Roman legionaries. They are both inlaid with niello, a blackish blend of silver, lead, copper, and sulphur, which was applied as a paste over the whole surface, then heated and scraped off all but the engraved parts.

Of the two simple bronze pins, the one with the moulded head is a woman's hairpin; the other, with flattened spherical head, is more likely to have been used to fasten clothing. Both these forms are found in the Roman period.

The bronze signet ring with engraved bezel (design damaged) is probably of Roman date. This solid one-piece form had developed out of the scarab or sealstone mounted

on a separate ring (pp. 15 and 27). That rings were highly esteemed as masculine ornament appears in the parable of the prodigal son (Luke 15:22).

Bracelets, beads, earrings, and other jewellery were worn chiefly by women. The bracelets, probably all of Roman age, were worn on both the lower and the upper arm and sometimes several together (see, for example, the pottery figurine, p. 54). Most are bronze, one is iron and several are black glass. The penannular, i.e., almost closed, metal type had been known since the Bronze Age and often occurs with ends in the form of animals. One of the bronze bracelets has tapering overlapped ends secured with heavy coiled wire, and another has a hinged hook-clasp, riveted on. The closed bracelets, made without bending, such as the glass and some of the bronze examples, are unusual before Roman times. The larger bronze piece, bent into shape and secured with wire clasp, is a neck ornament.

The disk and drop-shaped pendants, made out of thin sheets of gold decorated with fine granulation and wire appliqué and set with carnelians, were elements in a composite ornament, probably a necklace. Similar pendants were often used as earrings. Our pieces may belong to the early Roman period, when the "outward adorning of gold" (I Pet. 3:3) included this type of ornament; but such technical excellence is unusual after the Hellenistic period. *Plate XIII*

Few of our ancient Palestinian beads can be accurately dated. They range at least from the seventh century B.C. to the seventh century A.D. Most of them, however, are of the Roman period. A wide variety of material is represented in the collection: semi-precious stones such as carnelian, jasper, amethyst, agate, quartz crystal, jet and amber; ivory, bone and shell; copper and gold, cut, cast and hammered into shape; all of these materials, except jet and amber which were scarcely known in Palestine before the Roman period, had been used for making beads since prehistoric times. The *Plate XIV*

commonest, however, are glass and the closely related vitreous glaze, a product known in Egypt before 4000 B.C. The glaze of these beads is of the Egyptian variety which could be used only over a siliceous substance, and which, when combined with a specially prepared body material made out of powdered quartz, is known as "faience." Glass appears in several forms: the primitive polychrome form seen in the perfume bottle already described (p. 45); opaque artificial stones, also known in pre-Roman times; mosaic glass, made by fusing rods of different colours together and then slicing them, a technique probably invented in late Hellenistic Egypt; and transparent colourless glass, known only from the Roman period. Still greater is the variety of shapes, mostly geometric but including a few natural forms such as the rosette, the bunch of grapes and the cowrie shell; the lobed "melon" beads, probably originally derived from the lotus bud, were common in Iron-Age Egypt, but most of our examples of the form can be dated to the Roman period by the flat ends and the wide bore. The amethyst biconical beads are not later than the Hellenistic period. Beads similar to the gold biconical and barrel-shaped specimens and to the star-shaped beads made up of a number of tiny hollow gold spheres were known as early as the Bronze Age. The glass beads with "eye" designs of polychrome concentric circles, which first appeared in late Bronze-Age Egypt, became very common and widespread in Graeco-Roman times. Large faceted beads, like the jet specimen, are typical of the Roman period. The white linear decoration on some of the carnelian beads was formed by tracing the pattern on the bead with an alkaline solution and then heating the stone, a technique which produces a permanent etched effect. Closely similar etched carnelian beads were made in the early Bronze Age and at various subsequent periods up to the present. The patterns on our

examples are characteristic of the seventh century A.D. or later.

There is no hard and fast line between beads and amulets, since pieces conceived as pure ornament are often of symbolic origin and amulets were worn as jewellery, both by the living and the dead. Among those beads or pendants which may be classed specifically as amulets are the papyrus column, the eye of Horus, the scarab and stamp seal, the hand, and various protective deities; these are all traditional Egyptian symbols. Another and unusual form represents a horned altar, indigenous to Palestine and used by a wide variety of cults. The phallic amulets were common in the Roman periods. The miniature glass jugs, intended to quench thirst after death, were unknown before the Roman period, and the Christian cross, partly fused with the Egyptian symbol of life, was uncommon before the fifth century. Another Christian charm, probably of still later date, is the pendant of thin sheet copper with impressed design showing St. George(?) slaying the dragon; according to tradition St. George, a military officer under the Roman emperor Diocletian (A.D. 284-305), was martyred in Palestine; this motif too was derived from a pagan source, since similar figures represented pagan gods or heroes (the Greek Bellerophon and later the Egyptian Horus), and horsemen were frequently used in Sasanian decorative art. All the above examples belong to the Roman period, but amulets had been worn in Palestine from earliest times, and were not forbidden to the Jews.

Toilet articles. Two types of mirror commonly used in ancient Palestine are represented in the collection. The first is a simple bronze disk provided with a grip handle. When not in use it was kept in a specially-designed case or in a cloth cover to protect its polished reflecting surface from

CASES 9 and 14

tarnish. This type was used in Palestine at least as early as the Middle Bronze Age and continued into Roman times. It is impossible to date our example, which has lost its original handle, probably of wood or bone. The second type, which was introduced from Greece in the Hellenistic period, consists of two disks fitted together, with both inside surfaces polished. In our examples each disk is decorated with moulded concentric circles and has a suspension handle with moulded attachments in the form of busts representing the deities Serapis, Osiris, and Isis. The style of these attachments dates our pieces to the third century A.D. or later. The surfaces of both types of mirror were sometimes plated with silver. Glass mirrors were extremely rare during the Roman period and were unknown earlier. When St. Paul wrote "We see through a glass darkly" (I Cor. 13:12) he had in mind a metal mirror.

Plate XVI

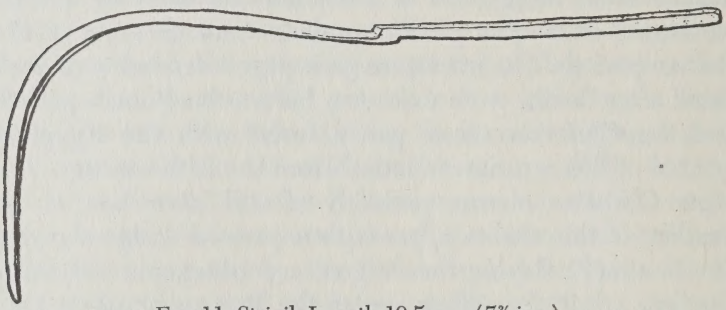


FIG. 11. Strigil. Length 19.5 cm. (7¾ ins.).

The plain bronze rods, slightly bulbous at one end, are sticks for applying eye paint or "kohl." The form was common from the Bronze Age to the Roman period. The bronze instruments with one flat broad end are spatulae for mixing and spreading ointments and cosmetics and are of Roman date. The rods with spoon-like or discoid ends may also have been used for extracting cosmetics from bottles. Glass,

Plate XVIII

bronze, and pottery vessels specially designed for perfumes and unguents have been mentioned already.

Strigils, scraping instruments used by athletes for removing oil and dirt after exercise, have a curved hollow blade; in those of Roman age, like our two bronze examples, the handle is usually rectangular. Brought to Palestine by the Greeks and Romans, they were never adopted by the native population.

Tools and weapons. Although iron tools were in general use one thousand years earlier, by far the greater number of surviving examples belong to the Roman period. Our iron implements from Roman Palestine have traditional shapes which had changed scarcely at all during the previous periods and which are, indeed, scarcely different from the simpler tools of today. They include the common forms of knife, pick, hatchet, adze, sickle and pruning hook, and also an anvil and a crow-bar. The knives have a tang over which the handle was fitted and nearly all the other implements have a socket or perforation to receive the handle. In Roman times as in earlier periods iron was forged and never cast. *CASE 14* *Plate XVII*

The bronze needles reveal two distinct methods of making the eye: one by bending over the end, and the other by flattening and perforating it. Needles had been used since prehistoric times. *Plate XVIII*

FIG. 12. Sling bullet. Length 5.5 cm. (2⅛ ins.).

The limestone sling bullet is of a shape that is more commonly found in lead during Hellenistic and Roman times and probably differs little from the stone used by David to smite the Philistine (I Sam. 17:50). Iron spears, which until Roman times remained similar in shape to the late-Bronze-Age socketed type mentioned above (p. 14), are not represented in the Palestine Gallery; an iron spear butt is shown.

The imagery of the passage ". . . they shall beat their swords into plowshares, and their spears into pruninghooks" (Isa. 2:4) is strengthened by a glance at the spear and the pruning-hook, both forms which were current at the time of Isaiah (end of the eighth century B.C.); for the sword and the plow-

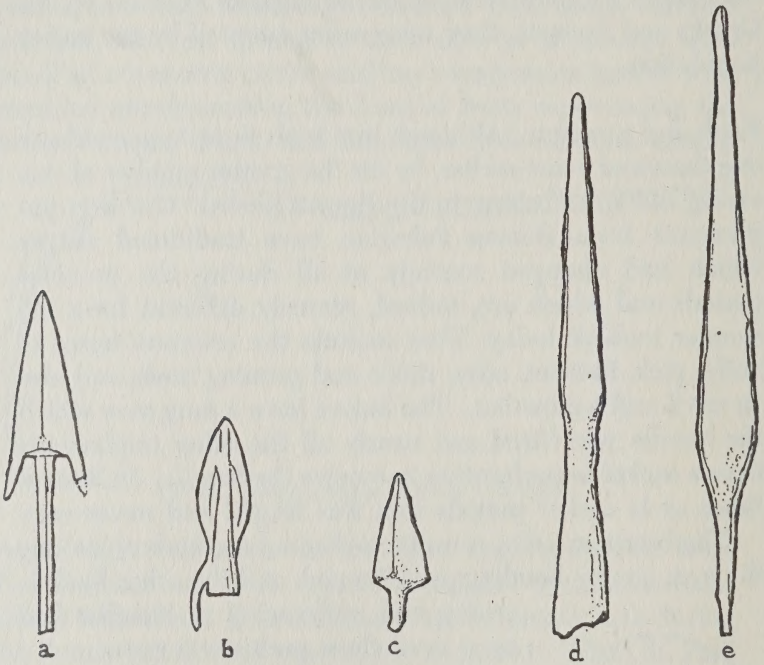


FIG. 13. Projectile points. Lengths: (a) 7.7 cm. (3 1/16 ins.); (b) 4 cm. (1⅝ ins.); (c) 3.5 cm. (1⅜ ins.); (d) 12.2 cm. (4⅞ ins.); (e) 14.3 cm. (5⅝ ins.).

share see page 80 below. Both tanged and socketed arrowheads were used from the Bronze Age to the Roman period. The bronze two-barbed tanged arrowheads and the leaf-shaped socketed example with single barb are Greek types which came to Palestine as early as the sixth century B.C. but which lasted through the Hellenistic period. The triangular tanged arrowheads belong to the Roman period although

similar forms occurred earlier. The heavy square iron projectile points are also of the Roman period; they were used both on cross-bow quarrels and on javelins.

The iron dagger, (badly rusted) is unidentified. The blade has a double channel extending only part-way down from its point, and an elaborate all-over engraved scroll pattern. A narrow tang fits into a cylindrical hilt in one piece with the shoulder of the blade. There are distinct traces of

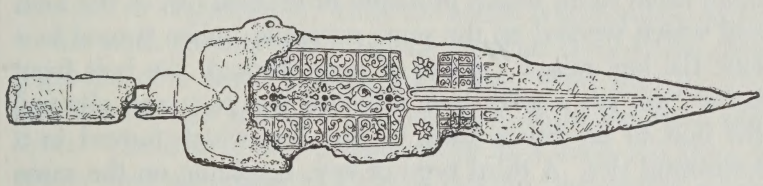


FIG. 14. Iron dagger. Length 35.6 cm. (14 ins.)

the wood of the scabbard over the blade and of the scabbard's iron border band, with one of the perforations for hooking it to the belt.*

Miscellaneous household objects. In the Roman period spoons such as our examples from Palestine were used at meals, although knives and forks were not. The silver spoon with round bowl and plain pointed handle was probably intended for extracting and eating snails and for eating eggs. Designed for more general use are the bronze spoons: two with pointed bowl and simple engraved decoration and one with oval bowl attached to a straight handle by means of a curved bracket underneath. The bronze spoon with small deep bowl and pointed handle was probably used for either condiments or cosmetics. *CASE 14 Plate XVIII*

The bronze hasps, with hinge at one end and projecting clasp at the other, probably secured the lids of trinket boxes.

*GA. 1795. Purchased from Vester, Jerusalem, in 1910. The line drawing is published in the hope of eliciting parallels for the dagger.

They are decorated with simple moulded and engraved designs.

Two kinds of keys known in the Roman period are shown. The first form, represented by the large iron key with five teeth parallel to the shaft, lifted pegs which secured a bolt by inserting its teeth into corresponding perforations in the pegs; the bolt was then drawn by means of a strap. The bronze key and the smaller iron keys are of a second and more usual form, which probably developed out of the first, and which worked on the same principle: when turned in a lock the key raised a series of pegs through the bolt from below; the key's teeth thus replaced the pegs and allowed the bolt to be drawn back by the key which moved in a horizontal slot. A third type of key, revolving on the same principle as the modern key, was known in Roman times and is well represented in our Roman galleries (Gallery 13).

CASE 19
Plate XIX

Figurines. During the late Hellenistic and Roman periods a wide variety of moulded pottery figurines, using both traditional themes and naturalistic innovations as subject matter, were manufactured according to popular taste. Among these the nude female idols or fertility figurines (pp. 17 and 26) scarcely preserved a distinct form. The type persisted, however, in figurines such as our grotesquely plump example of early Roman date, with hands on hips, three bracelets on each wrist and upper arm, a plain narrow neck-chain and a high headdress, probably consisting of two knobs of false hair, over a forehead fringe of curls and loose hair falling to the shoulders. That it was conceived as a goddess rather than as a human entertainer or concubine appears probable when it is compared with the very debased similar figure seated in a shrine which has an arch and steep pediment supported by flanking columns. The winged figure playing the Pan's pipes is the Graeco-Roman Eros (Cupid), god of love; he wears a debased form of "Phrygian" cap,

typical of the Phrygian god Attis, and suggesting some confusion between the two gods. The camel carries a large jar on each side of its saddle-cloth and reminds one of Palestine's importance in caravan traffic. These four pieces were made by pressing the clay into two separate moulds, one for the front and the other for the back; they were covered with a fine coating of lime which furnished a base for the colouring which originally enlivened them. The first three are third century A.D. or slightly later, while the camel is tentatively dated to the sixth century. The female figurine carved from the leg bone of a small animal is probably third century A.D. and may also be related to the earlier idols of Palestine and Syria. The hair is drawn back softly in a loose roll from a centre part, according to a Greek fashion, and carries a low slightly pointed diadem; the body is apparently clothed; there are two drilled holes on each side for attaching the arms. All these figurines were made during the period when Western culture was becoming assimilated by the mass of the people and show a curious fusion of Greek and Oriental styles.

With the exception of one animal (ox?), which was cast hollow in separate moulds for each side, our Roman period bronze figurines of gods and animals were all cast solid by the "lost wax" process. In this process, known in the Near East 3,000 years earlier and still in use today, a temporary mould of clay or plaster was built up around a wax model (which could have a core for hollow casting); the wax was then removed by heat and the molten metal poured into the mould in its place. Before the Hellenistic period this mould was always made directly from a hand-fashioned wax model and thus each finished product was unique. In the Hellenistic and Roman periods it had become usual to cast the model itself from plaster or stone piece-moulds which could be used repeatedly in mass production. Better work was often still produced, however, by direct modelling of the

wax for each object cast, and it is likely that our horse, of lively and faultless design, was made in this way. Probably made during the first or second century A.D., it is typical of the best Roman work; it formed part of a group consisting of two horses drawing a chariot. The two pendent goats or ibexes and the two free-standing bulls reveal workmanship of average quality; they may have been votive offerings, toys or personal ornaments. A bull's head which formed the handle of a vessel is included in this collection of bronze animals. Bronze figurines of gods were produced in enormous quantities for temple offerings, for household shrines, and to be worn as amulets.

CASES 9 and 19

Religious and funerary objects. The following gods of the Greek and Roman periods are represented. The Egyptian Horus, in falcon form, wearing the double crown of Egypt, and the Egyptian Apis, a bull wearing the solar disk and uraeus serpent, are shown among the bronze figurines. Three Romanized Egyptian deities are seen on the handle attachments of mirrors: Osiris and his consort Isis, both of whom had now invaded the West in mystery cults and who came to Palestine by this circuitous route with the Roman conquerors; and Serapis, a hybrid god specially created by the Ptolemies for political purposes. The Graeco-Roman Dionysos, god of wine and revelry, is similarly represented as a mask on the situla (p. 43 and immediately below). The Graeco-Roman Aphrodite or Venus is also shown among the bronze figurines, and the pottery female figurines as well as the bone specimen may be conceived as her oriental counterpart Astarte or Ashtoreth. Another pottery figurine has already been described as Eros or Cupid (p. 54).

Plate XI

Vessels used during the Roman period in the ritual connected with such deities are the bronze situla (p. 43) common in daily life but also used for libation ceremonies, particularly in connection with the worship of Isis; and the

bronze shovel for burning incense or for receiving the ashes from sacred lamps; shovels of this type were also used in Christian and probably in Jewish ritual, and it has been *Plate XII* suggested that the form is related to the snuff dishes mentioned in Exodus in connection with the temple candlesticks (Exod. 25:38). That the bronze pedestalled censer, with fluted bowl and hinged open-worked cover, was designed for Christian ritual may be inferred from the crosses which are a prominent feature of its heavy moulded ornament; it is probably sixth to eighth century; the "cherub" surmount-

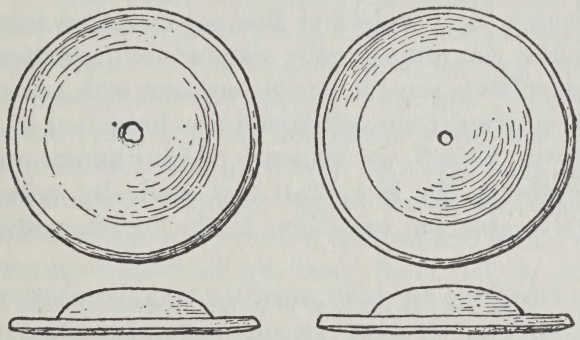


FIG. 15. Cymbals. Diameter 6.2 cm. (2⅜ ins.).

ing the cover and attaching the suspension chain is related to the Greek God Eros, and the doves on the rim were also borrowed from pagan symbolism, since this bird, as already noted, was sacred to the goddesses Aphrodite and Astarte before it became a Christian symbol.

The bronze cymbals, though sometimes used in secular life, more often furnished a musical accompaniment in religious ceremonies. They were originally chained together at the centre. The form changed scarcely at all from the beginning of the Iron Age to the Roman period and is the clashing instrument mentioned both in II Samuel 6:5 and in I Corinthians 13:1.

Votive offerings have been mentioned in connection with figurines of gods and animals (pp. 27 and 56). These offerings were model gifts for the gods and models of special objects of prayer, and were dedicated in the temples in fulfilment of a vow, to secure divine favours or to expiate offence. A thriving business had long existed in the sale of objects manufactured specifically for the purpose; but since all kinds of private property were offered as well, many of the objects of daily life already described, particularly some of the lamps and other vessels, may have been thus dedicated.

Although the Greeks and Romans cremated their dead the practice was not generally adopted by the native Palestinian population since it was inconsistent with a traditional belief in physical resurrection and was forbidden by Jewish law. It was, indeed, the influence of Christianity spreading from centres in the Near East that gradually induced the Romans to abandon cremation in the fourth century and later.

Plate XX

The limestone ossuaries, small rectangular chests usually resting on four very low feet and with sides either vertical or expanding slightly towards the top, are of particular interest to Jewish history. Most of them belong either to the first century B.C. or the first century A.D. and have been found in Jewish family tombs, particularly in the neighbourhood of Jerusalem. They were used for secondary burials, receiving the bones of people who had already been buried, in order to save space in the tomb during this period of persecution and overcrowding. Many of the bones doubtless belonged to Jews who had lived and been buried abroad. Usually each ossuary contained the bones of one person only and often small offerings, such as unguent flasks and lamps, were added. The lids are sometimes flat but more often gabled or rounded; one of ours is gently rounded near the

edges and rises abruptly to a triangular ridge in the centre. The decoration, scarcely ever finished on more than one side, is usually confined to geometric patterns and simple representational forms such as leaves and rosettes, but occasionally architectural motifs were used; the compass-drawn six-pointed star within a circle is almost never absent; and on one of our examples there appears a motif which strongly suggests a seven-branched candlestick. The largest of our three ossuaries, which alone has a gabled roof, has no trace of colour wash and is sparingly but carefully carved in "sunk" decorative units on an otherwise plain surface. The all-over decoration on the other two is in a technique peculiar to the class: they are covered with a red wash through which the pattern, characterized by zig-zag lines, was freely gouged into the soft stone in a way that recalls wood-carving. This style of decoration may have been borrowed from ossuaries of cedarwood and helps to support the evidence from the Talmud that the latter were used, although no actual wooden specimens have survived (cf. Tosef. Sanh., IX, 8). That the form of the ossuaries suggests houses is one more example of the constantly recurring conception in ancient times of the last resting place as a dwelling for the dead. Although none of the Museum's specimens is inscribed, the ossuaries sometimes carry the names in Greek or Aramaic of the individuals whose bones lie within; one has been found with the sensational but apparently genuine inscription in Aramaic: "Hither were brought the bones of Uzziah, King of Judah. Do not open."

Stone sarcophagi, both the rare marble imports and the more numerous native imitations in limestone, were used in early Roman times by the wealthy, but coffins of any kind had never been commonly used in Palestine. The mass production of lead coffins, which were very common from the second century to the fourth century A.D., was confined to

NORTH END OF GALLERY Plate XXI

Syria and Palestine. On the grounds of style it has been suggested that the coffins, which have attractive decoration in relief, were descended from Hellenistic and early Roman wooden sarcophagi. They were adopted by prosperous middle class Jews, Christians and pagans. One of our coffins is decorated with a vine pattern, a motive which appears almost exclusively in Christian and Jewish burials. The other two examples (fragments), one with Greek crosses within interlaced squares and the other with crosses alone, are certainly Christian coffins. All three are tentatively dated to the fourth century. The measurements of the coffins allowed for extra length to contain small offerings. The sides and lids were made of single sheets of metal cast in clay or sand moulds into which the design had been pressed by using one stamp repeatedly. The "repeat" unit may be easily determined by comparing different parts of the decoration.

Objects which were buried with the dead for his welfare in the next world fall roughly into three groups: (1) Objects of special form which were designed expressly for the tomb; of these the Palestinian Gallery offers no examples except the coffins and ossuaries. (2) Models which were manufactured for the tomb but which are cheap copies of objects of daily life; belonging to this category are some of the beads and amulets and some of the pottery vessels. (3) Objects which may have actually been used by the living; most of the exhibits in the gallery belong to this third category, and show how important for our knowledge of ancient life is this literal conception of existence after death.

CASE 20 Plate XXII

Coins. The representative series of coins relating to Palestine begins in the fifth century B.C. with the gold daric and silver siglos of Persia, reminding one that Palestine then formed part of the Persian Empire. In earlier times gold and silver had been used in exchange but as yet in unstamped form, and the metal required weighing on the occasion of

each transaction; hence the repeated references to weighing in the Old Testament: "Abraham weighed to Ephron the silver, which he had named" (Gen. 23:16).

After the Persian period, the Jews and other peoples of Palestine used the currency of each successive foreign power to which the country became subject: Alexander the Great of Macedon, the Ptolemies of Egypt and the Seleucids of Syria.

A series of silver coins bearing the legend *Yehud,* "Judah," and dating from the fourth century B.C. has been identified as the first autonomous coinage of the Jews (not represented here). After the Maccabees had succeeded in winning a semi-independent status from the Seleucids, a Jewish coinage was again issued at Jerusalem, but only in bronze. This series is illustrated by the small rough pieces put out by John Hyrcanus (135-104 B.C.) and Alexander Jannaeus (103-76 B.C.); a wreath, a poppyhead between cornucopiae, a wheel, and an anchor appear as motifs.

The later Maccabean and the Herodian princes continued to issue bronze coins. For larger denominations, however, the country depended chiefly on the silver coins of neighbouring commercial cities, above all Tyre, whose shekels were adopted by the Jews as "sacred money," that is, for the payment of the annual head-tax to the Temple Treasury.

The Roman procurators who governed the country from A.D. 6 onward kept up the issue of bronze coinage for small change. Coins of the procurators Valerius Gratus (A.D. 15-26) and Pontius Pilate (A.D. 26-36), under Tiberius, and Antonius Felix (A.D. 52-60), under Nero, are represented here. Motifs used are an ear of barley, an augur's wand, armorial equipment, and a palm tree with fruit. In addition to these provincial coins, Roman imperial coins, both gold and silver, came into increasingly common use. The standard coin was the silver *denarius,* rendered "penny" in the Authorized Version, and "shilling" in the Revised Version; its in-

trinsic value roughly corresponded to about twenty cents. The *as* (the "farthing" of the Authorized Version and the "penny" of the Revised Version) was one-sixteenth part of the denarius, i.e. about one cent. Still smaller denominations were the *quadrans* ("farthing") equal to one-fourth part of the *as,* and the *lepton* ("mite") of which two equalled one *quadrans.* Some rough and tiny bronze pieces shown have been identified with probability as "mites." Coins based on the Greek unit, the *drachma,* were circulating in the time of Christ, and were then closely equal in value to the *denarius.* The "ten pieces of silver" of Luke 15:8 were *drachmae.*

The coinage of the First Revolt (A.D. 66-70) is best known by the thick shekels and half shekels with chalice on obverse and three flowers on reverse. These were the last silver coins struck in the Jewish mint.

A series struck in Palestine to commemorate the capture of Jerusalem in A.D. 70 is represented by coins of the emperors Vespasian, Titus, and Domitian. The gold and silver coins of Vespasian both personify Judaea as a captive at the foot of a trophy. A similar scene appears on the bronze coin of Titus while the bronze coin of Domitian shows the goddess Athena standing on a galley, with a trophy and palm branch. All these coins bear portraits of the emperors on the obverse.

The desperate rebels in the Second Revolt (A.D. 132-35), having no stock of bullion, restruck Roman denarii and the coins of Antioch and perhaps Tyre. Jewish symbols are prominent among their designs, which include the ark and tabernacle, lulab with ethrog, amphora, lyre, and palm leaf. This was the final effort at independent coinage; thenceforth the coinage of the country was completely under Roman control.

Roman imperial coins were minted in many cities of Palestine; the coinage of the following is represented here: *Aelia Capitolina,* founded by Hadrian on the site of Jerusalem (see p. 34); *Caesaraea,* the northern coastal city

founded by Herod the Great in honour of Augustus and the seat of imperial government under the procurators; *Gaza,* the southernmost of the five Philistine cities, granted to Herod the Great by the emperor Augustus and a centre of paganism until the fifth century A.D.; *Askalon,* another Philistine city, semi-independent at the time of Christ; *Neapolis,* founded after the first Revolt on the site of ancient Shechem near Samaria; *Nicopolis,* on the road from Jaffa to Jerusalem, a city of uncertain origin; *Sebaste,* the ancient Samaria, refounded by Herod the Great; *Tiberias* on the west shore of Lake Galilee, founded by Herod Antipas, son of Herod the Great, in honour of Tiberius; it was an important centre of Rabbinical study. These cities may be found on the map, fig. 21. The dates of our municipal coins range from the first to the third century A.D. The designs often illustrate local features, such as Mt. Gerizim at Neapolis and the Temple of Zeus at Tiberias; or local deities, such as the Phoenician god Phanebal of Askalon, the Artemis (resembling "Diana of the Ephesians") of Neapolis, and the city goddesses of Gaza and Sebaste. The horned altar on a coin of Caesaraea is an interesting feature, although not identified with the worship of any particular god.

The legend of the Maccabean coins is always either Hebrew or bilingual (Hebrew and Greek); on the coinage of the First and Second Revolts Hebrew was employed exclusively; all other coins issued in Palestine during the Roman period bear no Hebrew inscriptions but only Greek or Latin.

Both native princes and Roman procurators when designing coins for use in Palestine generally respected the injunction "Thou shalt not make unto thee any graven image." As a result, the types on the Jewish coins are normally inanimate objects. The Jews, however, were not averse to using foreign currency stamped with designs of living creatures. Thus the tribute money brought to Christ

with Caesar's "image and superscription" was probably a *denarius* of Tiberius, of which a specimen is here shown.

Neighbouring Galleries. A thoughtful study of the Greek galleries, particularly of the fifth and fourth century vase paintings (Galleries 21 and 22), will help the visitor to understand the Hellenism which brought entirely new concepts of art and nature to Palestine during the period described in this section. The sculpture and crafts of the Roman galleries (Galleries 12, 13, and 14) give a clearer picture of the cultural changes during the second phase of Hellenism as it affected countries adjacent to Palestine, the phase in which Greek culture gradually blended with native life, becoming at the same time faded and distorted.

A large collection of objects of daily life and religion belonging to the Roman period, principally from Egypt, Syria, and Italy, may be seen in these Roman galleries; in many ways it supplements the Roman material from Palestine. The alabaster unguent bottles, for example, were imported from Egypt in large quantities during the late Hellenistic and early Roman periods, and are identified with the "alabaster box of ointment" of Mark 14:3, etc. Also seen here are the common writing materials used at the time when the New Testament and the Mishnah were written; they include papyrus, wax tablets, styli, and reed and quill pens. (Parchment, not represented here, became an important substitute for papyrus about 200 B.C. True paper was not known in the Near East until the Arabs learned the art of papermaking from the Chinese in the eighth century A.D.)

The trend towards new syncretistic or blended religions, so noticeable in the cosmopolitan atmosphere of the late Hellenistic and Roman periods, is illustrated by several objects in neighbouring galleries. In one of the Roman galleries (Gallery 14) there is a bronze magic hand carrying symbols to ward off evil. This is a cult object connected with

the worship of Sabazios, a Thracian god related to the Graeco-Roman Dionysos, who was adopted by a Jewish sect in Rome. In the Mesopotamian Gallery (Gallery 10) some bowls inscribed with spells represent Mandaeism, a very ancient fertility cult which in Roman times and later possessed certain features in common with Gnostic, Christian, and Jewish doctrine. Gnostic mystery cults, which expounded the Christian doctrine of redemption through divine revelation but which differed from Christianity in matters of creed, are represented in Gallery 20 by a collection of gems engraved with mystic inscriptions and symbols, and also in Gallery 13 by a similarly engraved stone axe.

FROM THE ARAB CONQUEST TO THE END OF TURKISH RULE
A.D. 638 - 1918

Historical. We have seen how deeply Hellenism had affected the Near East. The Arab conquest brought a complete return to oriental life. This was a new orientalism, however, coming fresh from the desert and quickly assimilating what it borrowed from the civilized past. The Arabs were of the same stock as the Hebrews and other desert dwellers who had periodically swarmed into the more fertile border regions since the beginnings of history. The Arabic language, like the languages of ancient Palestine, belongs to the Semitic group, and the Arabic script that first flourished towards the end of the first millennium of the Christian era is thought to have been developed from the script of the Nabataeans (p. 35) during the third century A.D.

The Byzantine empire, so disorganized at the beginning of the seventh century that the Persians were able to hold Jerusalem from 611 to 629, permanently lost Syria and Palestine to the Arabs nine years later. The prophet Muhammad (571-632) had united these desert dwellers in the name of Islam, a monotheistic religion created by him out of native Arabian paganism combined with Jewish, Christian and Persian doctrines. The spectacular growth of the Arab empire, however, which in less than a century had become as great as Rome's, was not caused directly by conversion to Islam but rather by the organizing powers of the conquerors. Although the masses of Palestine did not turn to the new religion until the eighth and ninth centuries, a few years after the conquest a complex system of taxation and privilege favouring Moslems had already inclined the native population to submit in self-interest to the new government and to adopt

its religion and its language. Western civilization was the more readily cast off because it had become increasingly corrupt and had remained basically foreign to the East.

The spiritual centre of this Moslem world was Mecca, birthplace of Islam and of its founder. The temporal centre was at first Medina, also in Arabia. Damascus, however, was its capital under the strong Arab dynasty of the Umayyad caliphs (661-750), who fell heir to the culture of recently conquered Sasanian Persia and who extended their empire along the south shore of the Mediterranean to the Atlantic and into Sicily and Spain. Under the Abbasid dynasts, who seized the caliphate in 750 and built Baghdad for their capital, the Persians became the dominant element within the state and the empire reached its peak of wealth and power, with a brilliant civilization drawing upon the traditions of Greece, Persia, and India.

Until the end of the ninth century Palestine enjoyed peace and prosperity under the Abbasids, still with the prestige of a holy land, since the Moslems recognized Moses and Christ as prophets and Jerusalem rivalled Mecca as a centre of pilgrimage. Christian pilgrims also came once more, and about the year 800 the Western emperor Charlemagne negotiated with the caliph Harun ar-Rashid to obtain special privileges for those from the West. But in 969, as a result of a great schism in Islam, Egypt established her independence under the separate rule of the Fatimid caliphs and for almost 150 years Palestine suffered from the struggles between the two powers. The increasing weakness of the caliphate during the eleventh century allowed Palestine to be overrun in 1072 by the Saljuq Turks, an early wave of Turkoman invaders who came down through northeast Persia.

The hardships of the Christians in Palestine during this unsettled period led to the First Crusade in 1096. The corrupt Christian kingdom of Jerusalem established three years later under Godfrey of Bouillon survived precariously until de-

stroyed in 1187 by Saladin, founder of a new dynasty in Egypt. Later Crusades, attempted at intervals until 1271, were nearly all total failures, although the emperor Frederick II held Jerusalem from 1229 to 1244 and Louis IX and the French held Acre and other seaports from 1250 to 1291. The Crusaders brought home to Western Europe a knowledge of oriental life and thus helped to spread a late phase of the Islamic culture known since the eighth century in Moorish Spain and Sicily.

During the thirteenth, fourteenth and fifteenth centuries Palestine shared the general confusion in the Near East caused by Mongolian invasions and social upheaval. After the middle of the thirteenth century it was for the most part ruled by the Mamluk sultans of Egypt. It was finally conquered by the Ottoman Turks from Asia Minor in 1516, sixty-three years after they had destroyed the Byzantine empire with the capture of Constantinople, and it remained under Turkish rule until the First World War. This four-hundred-year period of Turkish domination, though at times punctuated by war and revolution, caused little change in the life of the people. Palestinians still used the religion and language of Muhammad but had sunk to a primitive level far removed from the civilization of eighth and ninth century Islam.

The visitor who wishes to study the attainments of the Arabs and of the peoples who adopted their religion and the culture associated with it must go to the Gallery of Islamic Art (Gallery 21) on the third floor. In the Palestinian Gallery only a few objects are dated between the Arab conquest and most recent times. Of these objects the pottery suggests changes in the material environment of the common people, while the manuscripts remind one of the forms in which the great religious and literary traditions of the ancient Near East—Jewish, Christian, and Islamic—survived and were transmitted to the modern West.

Pottery vessels. A distinctive Arab ware dated to the eighth century is the very hard thick red or black pottery decorated with deeply cut geometric patterns, sometimes open-work but more often cut only part way through the thickness of the wall. Our examples include pedestalled cups or censers, simple cups with or without a handle and an open-work lantern with suspension handle. (Pottery lanterns resembling this specimen were also known in the Roman period; see, for example, one in Gallery 14.) A twelfth- or thirteenth-century ware is represented by the drab jugs of lighter fabric with cross-hatched decoration in red and black. Vessels similar to the thick-walled ovoid bottle with small mouth, pointed base, and stamped decoration have been identified as containers for perfume (rose water?) and dated to the thirteenth and fourteenth centuries.

CASES 7 and 15
Plate XXIII

Our series of pottery lamps, described on page 41, ends during the Islamic period. In connection with this series it was mentioned that the "Byzantine" moulded type continued into the new era and that the five-nozzled example (originally glazed) is an Arab survival of the Roman many-wicked type. The single-wicked moulded lamp with Arabic inscription reads: "Everlasting power and good fortune to its owner"; it is possibly as late as the thirteenth century. The lamps in the shape of open bowls or small jugs, hand-modelled or wheel-made, became common during the Islamic period; their wick-holders are of several kinds: a pinched rim, a trough-like nozzle, a closed spout, or merely a hole in the wall of the vessel.

Plate IX

These lamps illustrate an important new development, the use of glaze on common pottery. The new glazes, which were used with wonderful effect in the best work of Islamic civilization (see Gallery 21), superseded the earlier vitreous glaze which could be used only over a special body material (p. 48). Although metallic glaze had been applied to baked clay as early as 1000 B.C. in Mesopotamia, Palestinian pottery

vessels had generally remained unglazed until the introduction of lead glazes during the early Arab period.

Manuscripts. A Samaritan manuscript, the Book of Deuteronomy, illustrates the survival of this ancient sect and its archaic script, so similar to the Hebrew writing of Old Testament times (p. 31). Probably of eighteenth century date, it is written on paper and bound in brown leather.

CASE 12
Plate XXIV

The Torah scroll (the Five Books of Moses), written in Hebrew script on ram's skin and mounted on wooden rollers, is probably from eighteenth-century Jerusalem. The Megillah scroll (Book of Esther), written in Hebrew script on vellum and provided with a silver gilt roller-case of elaborate filigree design, is nineteenth-century work of Yemenite Jews (p. 71). The scroll, which had been generally used in the ancient world until it began to give way about the time of Christ to the codex (book with cut pages), still appears in this form in modern synagogue worship. The reverence of the Jews for the written Law has developed a high degree of skill in the art of the manuscript. These two Hebrew scrolls well illustrate the faultless execution and balanced design of Jewish handwriting, which are still evident in contemporary Jewish manuscripts and which have led to the high quality of early and modern Jewish printed books.

Plate XXV

The large manuscript bound in red leather and written on Italian paper in the Arabic language and script is a nineteenth-century religious miscellany, of the Orthodox Eastern Church. The text is in black ink punctuated with red, and the pages are richly illuminated and illustrated in red, yellow, blue, green, and gold. The illustrations are, of course, of Christian subjects but the artist did not hesitate to borrow his decoration from every source known to him, both Eastern and Western, using a wide range of styles and motives. The manuscript typifies the variety of influences to which literate Palestinians were at all times exposed.

MODERN PALESTINE

Historical. Palestine has again become strategically important in the commercial and military struggles between world powers and in the fight for the control of international lines of communication. The disagreement between Arabs and Jews is a new kind of internal problem, aggravated by a complex world situation. Palestine has remained the Holy Land for Christians, Jews, and Moslems, but Western influences are now destroying the Biblical life represented by the modern vessels, implements, and costumes in the Palestinian Gallery.

The population, close to two million and steadily growing, is still mainly Arab in speech and Moslem in religion. On account of large scale immigration, however, the Jews are increasing far more rapidly than the Arabs and now constitute one third of the country's total. The Christians, nearly all of whom are native Arabs, form a small minority; the Arab Christians, about 125,000 in number, belong to many denominations, of which the most important is the Orthodox Eastern Church; the 10,000 or more non-Palestinian Christians, engaged in religious, commercial and administrative activities, are divided into separate groups by denomination and by nationality. The Yemenite Jews, of whom there are only about 5,000 in Palestine, deserve special mention here on account of their importance in history and handicrafts: their ancestors had long been settled in Yemen, South Arabia, and their present population there is about 35,000; towards the end of the nineteenth century they began to emigrate to Palestine, where they now form about twenty small communities, and are specially noted for their fine metalwork.

According to the 1944 census there were 1,061,000 Moslems, 554,000 Jews, and 136,000 Christians in Palestine.

The country has an area of 10,000 square miles, from Lebanon to Egypt and from the Mediterranean to the Dead Sea and the Jordan River. The proportion of barren land, however, is very great and the desert has encroached upon much soil that was under cultivation in ancient times. Modern irrigation and land development plans, so far carried out almost exclusively by the Jewish colonists, promise to increase the fertile area substantially. At present most of the Jews and almost half the Arabs live in the coastal plains and the plain of Esdraelon, although these highly productive districts form less than one seventh of the total area of the country. The inland mountainous regions, in which Jerusalem, Bethlehem, and other historic towns are situated, are rocky and barren, but cereals are grown in small arable pockets of land, and carefully tended terraces for the cultivation of olives and other fruits have been constructed on the hill-sides and also on the slopes of the Jordan Valley to the east. The houses of Arab farms and villages have changed little since ancient times: they are still built usually of mud brick in the lowlands and of stone in the highlands. Most of the country people who live in the central hill districts are settled peasants, but the southern deserts support nothing but Arab tent-dwellers with their flocks. In remote regions across the border these nomads are warlike and independent; the long plumed lances shown in the Palestinian Gallery (NE. and SE. corners) bear witness to their armed raids on horseback, a picturesque form of lawlessness that is fast disappearing.

Organized Jewish colonization began as early as 1870, steadily increasing until the beginning of the twentieth century, but until the end of the First World War there were only about 85,000 Jews in Palestine. The country's recent industrial development, which includes diamond cutting and the manufacture of chemicals, textiles, and metal products, is mostly confined to the coastal towns and is almost entirely

controlled by the Jewish colonists. The growth of Jewish industry and of Jewish communal experiments in agriculture, viticulture and citrus cultivation has been spectacularly successful and has had the generous financial support of Jews throughout the world. The colonists have also created model systems of education and social services, including scientific research, public health, and recreation.

The high standard of living of the Zionist Jews contrasts with the poverty, illiteracy, and disease among the Arabs. Observing and competing with these ultra-progressive colonists, the Arabs are awakening to the benefits of Western science even though they still violently resent the threat to their traditional way of life. From Cairo, Damascus, and Beirut, centres of Arab culture close to Palestine, have chiefly come the ideals of nationalism and democratic progress loudly voiced by a small group of Palestinian Arab intellectuals.

Contemporary events are moving so rapidly that we cannot attempt in this brief summary to present them in proper perspective. The following, however, is a list of the principal political developments in Palestine between 1914 and 1948.*

1915-16. The Hussein–McMahon letters exchanged during the First World War, promised British assistance in the establishment of Arab independence.

1917. The Balfour Declaration issued by the British government approved the establishment in Palestine of a national home for the Jews (endorsed by the French and Italian governments in 1918, and by the United States Congress in 1922).

1920-21. Arab riots in Palestine, with demand for independence, partly caused by League of Nations support of Zionism.

1922. The Churchill White Paper disclaimed the intention

*Most of this summary was compiled from the *Report of the Anglo-American Committee of Inquiry, 1946, Washington,* which was also freely used in preparing the rest of this section.

of creating a Jewish state in Palestine and suggested the ultimate creation of a bi-national Palestinian state.

1923. The League of Nations Mandate with Great Britain as administering power became effective. This mandate was part of the peace settlement at the end of the First World War. It officially recognized a Jewish National Home.

1929. More Arab riots, caused by dissatisfaction with the British administration and by fear of the growing Jewish colonies.

1930. The Passfield White Paper repeated the assurances given to the Arabs in the Churchill White Paper, proposing the creation of a legislative council and greater restrictions on Jewish immigration and on Jewish purchase of land.

1931. The MacDonald Letter attempted to pacify the Jews by an official interpretation of the Passfield White Paper, minimizing its provisions.

1936. An Arab general strike supported demands for self-government, prohibition of land transfers to Jews and cessation of Jewish immigration.

1937. The Peel Report suggested the partition of Palestine between Arabs and Jews. Later in the same year and during 1938 there were renewed Arab outbreaks, accompanied by more stringent British regulations.

1939. A White Paper, published before the outbreak of the Second World War, presented plans for the creation, within ten years, of an independent state shared by Jews and Arabs. It limited total Jewish immigration to 75,000 persons, to be admitted during the succeeding five years, and placed restrictions upon the purchase of land by Jews. Jewish terrorism and large-scale private armament date from 1939.

1940. The Land Transfers Regulations (land purchase restrictions) were put into effect. Large scale illegal entry began, following the enforcement of the immigration quota system recommended by the White Paper.

1943. The British government announced that 31,000 Jews

would be permitted to enter Palestine beyond the time limit, on account of war-time difficulties in filling the quota. Restricted legal immigration continued until the end of 1945 at the rate of 1,500 persons a month.

1945. Formation of the Arab League. The seven member states in the League, Egypt, Iraq, Syria, Lebanon, Transjordan, Saudi Arabia, and Yemen were independent, but Palestine participated by special arrangement. Later in the same year the Arab Higher Committee of Palestine, representing all Arab parties, was formed.

1946. The Report of the Anglo-American Committee of Inquiry recommended that 100,000 European Jews be admitted immediately to Palestine; that Jews be more freely admitted to all other countries; that the Land Transfers Regulations be rescinded; that the present Government of Palestine be continued under mandate until present hostilities cease; and that, to make an independent state possible, Arab economic, educational, and political standards be raised to the Jewish level and the educational systems of both the Jews and the Arabs be freed from nationalistic propaganda. The Arab states presented a plan for an Arab-Jewish Palestinian state.

1947. Great Britain submitted the Palestine problem to the United Nations, whose General Assembly voted in November of the same year in favour of partition of Palestine into separate Jewish and Arab states.

1948. Outbreaks of violence gradually developed into open warfare, which intensified after the formal termination of the British Mandate and the proclamation of the Jewish state of Israel, both on May 15th.

Pottery vessels and household equipment. Modern Palestinian pots, bowls, jars, jugs, and cups are similar in shape to their ancient equivalents and show how persistently the potter's craft clung to tradition through the centuries. Fabric

CASES 8 and 13 Plate XXVI

and decoration also recall ancient methods; the clay is of much the same composition and is shaped, smoothed, and baked in the same way, and the surfaces are often decorated in similar painted, incised, or moulded techniques. The thick-walled "Ramallah" ware, pinkish drab pottery painted with simple geometric and plant designs in red, is handmade; so too are the thick pots and strainer, the "frying pan" and the home-made braziers; the rest of the pottery is wheel-made, and for the most part undecorated, but some has a glossy black coating with crude designs in bright red.

Large jars, like the two-handled example with bulbous mouth and round base, are used for fetching and storing water and for storing olive oil. The round base rests in a hole in the mud floor of the house, in a built-in clay stand or in a ring stand made of intertwined twigs. Another type of jar used for the same purpose is represented by the two flat-based four-handled specimens. These jars had lids like the concave lid with strap handle from centre to edge. Large storage jars are not common and are being rapidly replaced by the commercial four-gallon can; wine consumption, one of the reasons for the frequent appearance of the storage jar in ancient times, has been reduced ever since the Arab conquest, on account of the Koran's injunction against wine and drunkenness. Water jugs, which vary greatly in size and form, may be with or without a handle and with or without a spout. The handled cup is for dipping and drinking. The open bowls and dishes are food containers. The round-based pots, specially distinguished by two upward-sloping saucer-shaped handles, are a common form of cooking pot. Deeper pots with two loop handles at the mouth, and resembling still more closely the ancient cooking pots, are used for milk. The two strainers and the round "pan" for frying and making omelets are culinary utensils still entirely made of clay but doomed to replacement by Western metal types.

The open bowl on a high hollow foot is a portable heat-

ing hearth, in which charcoal is burned. It is handmade, of lightly baked clay, and is covered with a white slip upon which a floral decoration is freely painted in red, pink, brown, and two shades of blue. The rim rises to three points in order to support a vessel. Fixed hearths consisting of a hollow in the floor have also been used for both heating and cooking from ancient times to the present; but the heating brazier mentioned in Jer. 36:22 was portable. The large two-handled brazier made of coarse lightly baked clay tempered

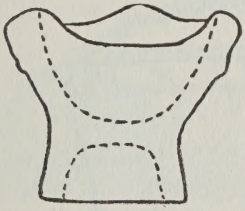


FIG. 16. Heating brazier (elevation and section). Height 16.1 cm. (6⅜ ins.).

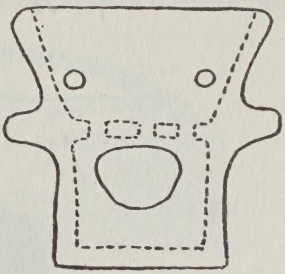


FIG. 17. Cooking brazier (elevation and section). Height 22.8 cm. (9 ins.).

with chaff is specially designed for cooking. The charcoal fire is kindled in the upper bowl-shaped compartment which has a perforated floor to supply a draught from below and to allow the ashes to drop to the lower compartment. A pot, dish, or griddle may be placed over its mouth. The roughly cylindrical oven, in which small cakes or bread are baked, is a home product made of a coarse mud and straw mixture. It is typical of eastern districts; in western Palestine a floorless oven which functions in much the same way is found. Neither variety is used inside the house; baking is done in a separate "bakehouse" in the court or on the edge of the village. The evening before baking a fire of wood, dung cakes, or dry stalks is kindled inside the oven. The fuel is shoved in through the side opening and the embers are swept

out in the morning with a small whisk. The side opening is then closed, usually with a stone, and the cakes of bread are set in through the top opening. The lid is immediately put on and the oven is completely covered with dung mixed with chopped straw. This type of oven is particularly well suited to dry countries like Palestine where wood is scarce. There is no evidence for its occurrence in ancient times, when the country had more timber. A large cylindrical (sometimes domed) oven, either sunken or above ground and

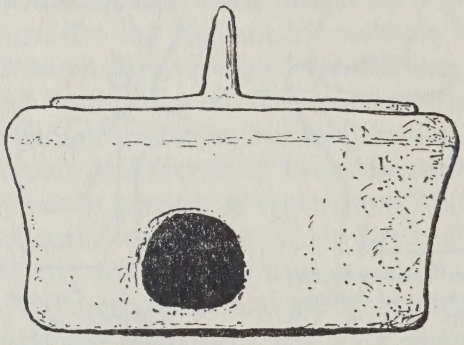


FIG. 18. Oven. Height (without lid) 25.5 cm. (10 ins.).

heated with a wood fire kindled within it, was then known, and a similar oven is still used communally in Palestinian villages. This wood-burning oven is frequently mentioned in the Old Testament in connection with baking bread and roasting meat (Lev. 26:26, 2:4, Isa. 44:15, Hos. 7:4, etc.). Ovens with separate chamber for fuel and baking are not known to have existed in ancient times, and, apart from the ovens of professional bakers, are rare in modern primitive communities. The bedouin (desert tent-dwellers) use no oven or brazier but bake their bread and roast their meat on an open camp fire; a convex and roughly circular sheet of forged iron is placed, hollow side down, over the fire upon supporting stones, and furnishes an easily transported

EAST WALL

baking surface for cakes or bread. This simple cooking device, which is merely an improvement on a flat stone, is sometimes also used by peasants, either directly over a fire or on a cooking brazier.

Since grain is stored in the house for protection and ground on the spot for family consumption, it is not surprising that grain bins appear as prominent and distinctive pieces of peasant furniture. Built-in storage arrangements are common and several movable bins such as our rectangular specimen are often seen in one house. These grain bins, of either

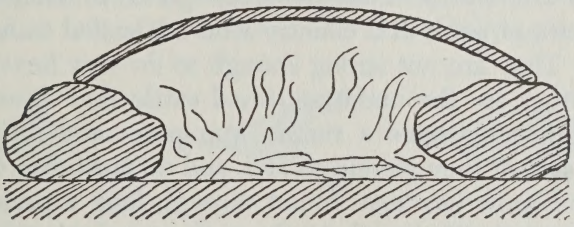


FIG. 19. Diagram (section) to show use of iron cooking device. Diameter 53.3 cm. (21 ins.).

individual or multiple form, are made at home by the women of the house. Their walls consist of a sun-dried mixture of mud and chopped straw. The horizontal top and bottom are made of reeds plastered with mud. The feet, which extend along the width of the bin, are a necessary protection from mice, dirt and dampness. The grain is poured in through an opening at the top and removed through an opening at the bottom. The upper opening was closed with a clay or wood cover or with a straw mat and the lower one with a piece of cloth stuffed into it; a basket or dish was placed underneath to catch the spill. Our bin is painted with a crude but gay design in blue and reddish brown. This decoration, which includes birds, trees, and a woman, all highly conventionalized, suggests a tradition extending back to Roman times (cf. pp. 40, 42 and 54). Nothing similar to the

CASE 21
Plate XXVI

rectangular grain bin was known in ancient Palestine; the common device for household storage of grain was then the large pottery jar (pp. 23 and 37). The round four-footed storage pot, also made at home out of mud and straw, is of smaller capacity and may have been used for flour, which is kept in the house in small quantities.

CASE 18

Agriculture and the preparation of flour. Palestinian plows are light flimsy implements but well adapted to stony soil and primitive conditions. They are not only easily manipulated to avoid rocks but are easily carried to remote fields, an important point in a country where wheeled transport is scarce. They are not strong enough to do very heavy work but neither are the undernourished cattle that draw them. The plowshares have a simple iron point and no moldboard, so that they merely scratch and do not turn a furrow. A deep furrow has been found through long experience to bring unproductive earth to the surface and to reduce the yield. The plow has scarcely changed its form since the days of Isaiah and still recalls his words ". . . they shall beat their swords into plowshares" (Isa. 2:4; the Biblical "sword" is often more correctly rendered "dagger").

WALL SPACE and CASE 13

Plate XXVII

The plow consists essentially of two parts: (1) the carriage of the iron plowshare together with the handle for steering and pushing, and (2) the pole connecting the plow to the yoke. The draft animals are usually oxen or cows but are occasionally mules or camels. Two animals of the same kind are nearly always yoked together; sometimes, however, the plow is drawn by a single animal or by two unpaired animals. The yoke is a simple wooden pole laid over the animal's neck and fastened by means of two paired sticks inserted vertically into the pole at each end; the ancient yoke was probably similar (Isa. 10:27, Jer. 27:8). There are no reins on the yoked animals, which are mainly directed by shouted orders. To enforce obedience the plowman must

carry a goad; this is always a stick about two yards long with an iron prodding point at one end and a small iron blade at the other to clean the plowshare and to break up clods (cf. I Sam. 13:21).

The plowshare varies a little according to district: (1) The form usual in southwestern Palestine is a flat pointed piece of iron expanding to an angular projection at each side and bound to the carriage with an iron band. (2) A less primitive form is found in northern and eastern Palestine; it has a flat point expanding to a funnel-shaped socket for attachment and two long iron side-pieces sloping backward and outward to widen the furrow. (3) The Moabite plowshare,

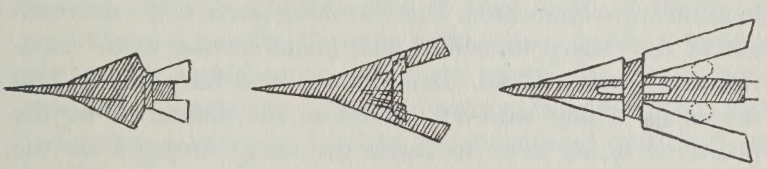


FIG. 20. Types of plowshares (shaded areas metal, the rest wood).

most primitive of all, has an iron middle section, which is long and narrow and ends in the point, and wooden side pieces serving the same purpose as the iron pieces of the two preceding forms; it is attached to the carriage in the same manner as the first form; it can be used only for light plowing in stone-free land.

An iron hoe, which is also used alone on terraces and other land inaccessible to the plow, is used to break up and level the soil after plowing, and a board or a branch is sometimes dragged over the ground as a harrow.

Wheat is by far the most common field crop, although considerable quantities of barley and sorghum are grown. At harvest time the grain is cut with a sickle and the hard lower part of the stalk is left standing. The usual harvesting sickle has a slender, fairly straight blade with cutting edge either smooth or finely serrated. The type with shorter, more

Plate XXVIII

sharply curved blade is designed to cut heavier stalks and weeds. Sickles were used for harvesting grain in ancient times (pp. 13 and 51. Jer. 50:16; Mark 4:29).

After reaping, the grain is carried on the backs of farm animals, or by the farm women, to an open-air threshing floor (cf. II Sam. 24:16; I Chron. 21:15; Ruth 3:2 etc.), which is usually communal and situated just outside the village. Sometimes cattle trample out the grain unaided but more often a special threshing implement is used, a board studded with projecting bits of stone on its lower surface and bent upward in front. The stones, which are usually basalt, must be constantly replaced, and fragments of old handmills are often used. This threshing board is the descendant of the "sharp threshing instrument having teeth" mentioned in Isaiah 41:15. It is drawn by a farm animal and driven by a boy who sits either on the animal or on the board; it is his duty to catch the dung dropped by the animal, which he does sometimes in his hands but more often in the funnel-shaped wickerwork dung-catcher on a long stick. During threshing the grain is distributed over the floor with a three-pronged wooden turning fork and a broom.

Winnowing requires a wind of just the right velocity, since the chaff must be blown away but not the grain along with it. The threshed grain is swept into a pile and is then tossed into the wind with wooden forks. The winnowing fork with five prongs set in a transverse frame is a south Palestinian form, while the specimen with seven radiating prongs is a northern type. The wooden shovel, which is found in northern districts, serves the same purpose as the three-pronged turning fork, and is also used for winnowing pod vegetables, bran for fodder, and the sweepings from the threshing floor. The shovel mentioned in Isaiah 30:24 was probably used for heaping up rather than for tossing, and the "fan" in the same passage was probably a fork rather

than the scoop used by the ancient Egyptians (Gallery 6), since an implement of the same Hebrew name is associated with forks in the Mishnah (Kelim 13:7).

After being winnowed the grain is sifted twice through coarse sieves of interwoven gut or rawhide (cf. Amos 9:19) and is then measured. It is finally carried in sacks to the village by donkeys, mules, or camels.

Meal and flour for family consumption are ground in a rotary handmill, both by peasants and by bedouin. This mill consists of two flat circular stones, usually basalt, and of nearly equal size. The upper stone rests upon the stationary lower stone and is rotated upon it by means of an upright wooden handle inserted into a hole near its edge. A central hole, usually through both stones, holds a vertical pin, which furnishes an axis upon which the upper stone revolves and acts as a hopper to receive the grain. The mill is fixed in a home-made contrivance of mud and chaff for holding the meal or flour as it comes from between the stones. The lower stone is set into the floor of this structure, which has vertical walls and widens at one side into a basin. The handmill is worked by women, usually two together, who sit with it between them. As the grain, which has been carried from the granary in a flat basket, is shaken into the mill with the left hand the upper stone is turned with the right. The creaking and groaning mill is frequently heard at night in the villages. In northern Palestine handmills are used almost exclusively for groats, and flour is ground in larger mills turned by either water or mule power. *Plate XXIX*

In Old Testament times the only mill known was a simpler form worked with a backward and forward motion (Num. 11:8; Isa. 47:2, etc.). The rotary mill first came into use about the time of Christ, and is the form of mill mentioned in Matthew 24:41, and in the Talmud (cf. Bab. Metz. IX, 13).

Sifting is done both before and after grinding. A sieve

with fine mesh, usually woven out of horse-hair, is particularly necessary for separating the ground flour from the coarser bran. Such horse-hair sieves are usually made by gipsies, who use a crude loom for the mesh and bend the frame out of thin strips of wood. In addition to a complete sieve we show a partly woven horse-hair sieve mesh on the loom (see also p. 88).

Plate XXX

Costume and jewellery. Palestinian costume varies considerably according to district. It is primitive in remote parts of the country and Europeanized in the larger towns.

CASES 11, 16, and 17

The bedouin, of whom the great majority live in southern desert regions but who are sometimes seen in the north and in the Jordan Valley, retain a form of dress that has been scarcely influenced by the West: the men wear a loose cotton inner garment, usually white, which is closed except for a short slit at the front of a plain round neck and which reaches at least as far as the calves of the legs; the sleeves are usually of a triangular cut, very wide at the edge and hanging down in a long point by which they may be knotted together over the back of the neck; the back and front of the garment are made out of the same piece of cloth, so that there is no shoulder seam; the sleeves, however, are separate pieces, and the sides usually have triangular insertions to widen the garment towards the hem, although they are occasionally slashed instead. A short-sleeved white or coloured outer garment may be worn as well. These garments are loose in cut but are always confined at the waist with a broad leather belt or with a girdle of striped fabric. A sleeveless open coat, very wide and straight, is worn for extra warmth over the dress described. It is often woven with a warp of plain cotton and a weft of sheep's wool or goat's hair, and is pieced together out of four horizontal widths of the material. Black is the natural colour of the goat's hair and sometimes forms a wide vertical stripe con-

Plate XXXI

trasting with the lighter colour of the wool, which may be either natural or dyed with native vegetable dyes. The coat is usually trimmed sparingly with embroidery. Flat sandals of dried camel's hide, with straps of the same material or of twisted camel's hair, are worn, although men often go barefoot. A skullcap is hidden by a large square headcloth, which is usually of white cotton for the summer and coloured wool for the winter, but which may also be of striped fabric such as our tasseled example woven with red silk warp and striped cotton weft in red, yellow, blue, brown, and white. The headcloth, which falls over the shoulders, protecting the back of the neck from the sun, is secured with a rope of black goat's hair yarn twisted into a double ring.

Plate XXXII

Plate XXXIV

Bedouin women wear a wide dark blue cotton garment corresponding to the men's inner garment but extending to the ground; it almost always has the triangular sleeves with a long point. A short-sleeved blue garment may be worn over it, and a girdle of white or coloured fabric ties the costume in at the waist. Women sometimes wear a wide sleeveless topcoat, like the men's coat but of a plain dark colour. A voluminous dark headcloth falls around the figure and is sometimes secured with a headband of folded cloth. Bedouin women almost always go barefoot.

The men of farms and villages usually wear a long white or blue inner garment similar to that of the bedouin, with a fabric girdle, and over this the sleeveless topcoat, already described for bedouin dress, or a shorter coat with sleeves. They wear soft leather shoes, brown or red, with a flat sole upcurving at the toe and an upper which usually rises to a point at the heel and may be provided with a tongue. The skullcap is covered with a red felt fez, which is worn with a headcloth of white cotton or coloured silk wound around it. In the north and in prosperous surroundings elsewhere they may wear a shirt or smock reaching to the knees, white cotton trousers, very wide above and narrow at the ankles,

Plate XXXII

a long-sleeved girdled coat of striped or patterned fabric, an embroidered cloth jacket or a long coat, and a less primitive type of shoe, with stiff sole and red morocco upper.

Peasant women wear a cotton (occasionally linen) inner garment which may be either blue or white and which has the triangular pointed sleeves worn by peasants and bedouin of both sexes. It is usually trimmed with embroidery, for which the towns of Ramallah and Bethlehem are especially noted, and is worn with a folded girdle of striped fabric. Over this garment they may wear a long open garment with short sleeves and a girdle, an embroidered short-sleeved jacket or a striped sleeveless topcoat similar to the men's sleeveless coat but shorter and narrower. In Samaria and Galilee they often wear long full white trousers, narrowing to the ankles and worn under a girdled garment reaching below the knees. The custom of wearing trousers has only recently been adopted by both men and women in northern rural districts and is of Persian origin.

Plate XXXI

Plate XXXIII

Peasant women usually go barefoot but sandals and simple flat-soled leather shoes with high uppers are sometimes worn. Wooden clogs are worn as a protection against wet and mud, and are attached to the foot by a single strip of leather or cloth across the instep. More prosperous women sometimes wear these clogs in the house instead of slippers; they may then be elaborately ornamented, like our pair with mother-of-pearl inlay.

Plate XXXII

Peasant women, and sometimes bedouin, wear a cloth hood to which rows of coins are sewn and which is rolled or plaited into the hair at the back of the head. In Bethlehem and other localities married women substitute for this hood a higher cloth or felt cap stiffened with cardboard or made out of an old fez decorated with embroidery. Like the hood it is stitched with rows of coins which sometimes completely cover it. From each side hangs an elaborate metalwork ornament and under the chin there is a "chin-strap" of coins

Plate XXXIII

on a chain. These headdresses, which may carry the entire family savings, are usually covered with a large white or coloured head-cloth falling over the shoulders. The head-cloth may be folded and secured in various styles and in many districts is worn alone.

No actual clothing from ancient Palestine has survived and detailed descriptions are lacking in the ancient literature. In their length, fullness, and use of pattern these modern garments bear a general resemblance to the costumes of West Asiatic people seen in ancient Egyptian and Assyrian monuments. The dress of the daughters of Zion mentioned in Isaiah 3:22-24, with "changeable suits of apparel," "mantles," "wimples," "hoods," "vails," and "girdles," suggests that feminine city fashions of Isaiah's day may have resembled modern Palestinian country dress. In pre-Roman times sandals not unlike our modern pair were the only footwear in common use for men and women, and where the word "shoe" occurs in the Old Testament it is to be visualized as a sandal (I Kings 2:5; Ezek. 24:17, 23; Song of Sol. 7:1, etc.). A list of men's garments in the Talmud (Shab. 16, 5) includes felt cap, kerchief, girdle, trousers, and shoes. That costume of Roman times was greatly influenced by Graeco-Roman fashions may be inferred from the number of Greek terms for dress which appear in this and other passages in the Talmud. Shoes as well as sandals were known in that period (Luke 15:22; Mark 6:9; Yeb. 39b, etc.). The remarkably well-preserved clothing from late Roman Egypt (Gallery 12)—loose linen garments with patterned woven bands of wool, shoes and sandals and linen caps—is relatively close in time and place to New-Testament Palestine and should be compared with our modern Palestinian costume.

Cotton, from which the majority of our modern Palestinian garments were spun and woven, is grown to some extent in irrigated land in Palestine, but is largely imported from Egypt. The bow-like implement is for "carding" cotton or

EAST WALL Plate XXXIV

restoring life to a cotton mattress; with the wooden mallet the worker strikes the bowstring, which shreds and fluffs the cotton. Sheep's wool, unlike cotton, is an important native product, both for export and for the manufacture of homespun coats, head-cloths, girdles, and other clothing worn by country people in Palestine. Goat's hair is also extensively grown for peasant and bedouin coats, for sacks and above all for bedouin tents. Flax, which needs an abundant water supply for processing, is seldom grown in Palestine for textiles, nor is linen often used for more primitive Palestinian costume. The silk sometimes seen in peasant and bedouin garments, head-cloths, and girdles is imported, although a little has been produced in Palestine in recent years.

Wool, linen, and goat's hair were woven in Old-Testament times, as already noted (p. 25). There is no certain reference to either cotton or silk in the Bible (the use of the word "silk" in Revelation 18:12 has been questioned) but both were known in Roman times and are mentioned in the Midrashic literature. Cloth is still spun and woven by peasants and bedouin, and spindles and looms have scarcely changed in the more primitive communities since the beginning of the Iron Age (see p. 25). Women are the spinners, and occasionally old men. The simple horizontal loom, with its warp pegged to the ground at each end, is still seen and is the only form used by the bedouin, among whom weaving is women's work. The vertical loom, similar in principle but employing a frame, is usually worked by men; this "frame" loom was known in late-Bronze-Age Egypt and was used by the Romans, who preferred it to the more primitive warp-weighted vertical loom of the Greeks. The pit-treadle loom, whose existence in ancient times has not been proved, is a less primitive type commonly used by professional weavers but also sometimes found in peasant homes. The loom for weaving a meal sieve illustrates the basic construction of the first two types of loom. It was

WEST WALL Plate XXX

propped against a wall in a roughly vertical position. The shed-stick was inserted under alternate warp threads. A harness-rod carried loops attached to the warp threads remaining under the shed-stick and was raised or swung out to form the alternate shed. The weft threads were carried through the warp by a "shuttle" in the form of a notched stick.

The collection of modern Arab jewellery in the Palestinian Gallery illustrates the personal ornament worn by Palestinian women. This type of metalwork, usually consisting of elements strung or linked together in rows from which hang a great number of small metal ornaments or amulets, is manufactured in the Arab countries on the south and east shores of the Mediterranean and is seen in Anatolia and even as far east as India. It is produced plentifully in Cairo and Damascus, in both silver and inferior metals. The Yemenite Jews, however, with a long tradition of craftsmanship in southern Arabia (p. 71), have produced the finest silver work of the kind, using the ancient techniques of filigree, granulation, and engraving with wonderful effect and often combining coral with the metal. The specimens of Yemenite jewellery shown here may have been brought from Yemen to Palestine by the migrating Jews. That the highly developed metalwork of southern Arabia has influenced the jeweller's craft both in India and in Eastern Mediterranean countries is indicated by a comparison of styles and forms of jewellery in all these regions. This is not strange since Arabia has always been the geographical centre of a lively coastal trade between India to the east and East Africa, Egypt and Palestine, to the west and north.

Plate XXXV

Among the common forms of jewellery worn in Palestine and represented here are neck chains, hair ornaments, earrings, breastpins, bracelets, anklets, fingerrings, noserings, and salve and perfume containers. The armlets of coloured glass, probably imported from Cairo, are worn on the upper

arm while the silver bracelets are worn on the wrist. The description of the daughters of Zion in Isaiah 3:18-24 should again be recalled in connection with this jewellery.

When our modern jewellery is compared with the ancient specimens (p. 47) it will be seen that amulets are as important now as in ancient times, still serve the double purpose of protection and adornment, and in many cases have scarcely changed in form. Hands, crescents, human figures, boar's tusks, stag beetles, and knucklebones, are among the numerous charms used today. Blue and sometimes red, favourite colours since the Bronze Age, are still worn in the form of beads to ward off evil. Written charms are sometimes inscribed on metal but more often are placed on pieces of paper within elaborately decorated amulet cases; this custom too was general in the ancient world.

BIBLIOGRAPHY

THIS list contains the more important works used in the present study of the Museum's Palestinian material, and in addition contains a small selection of popular books on the subject.

GENERAL

W. F. Albright, *Archaeology and the Religion of Israel.* Baltimore, Johns Hopkins University Press, 1942.

W. F. Albright, *From the Stone Age to Christianity.* Baltimore, Johns Hopkins University Press, 1940.

Millar Burrows, *What Mean These Stones? The Significance of Archaeology for Biblical Studies.* New Haven, American Schools of Oriental Research, 1941.

R. M. Engberg, *The Dawn of Civilization.* Chicago, University of Knowledge, 1938.

Jack Finegan, *Light from the Ancient Past.* Princeton University Press, 1946.

Kurt Galling, *Biblisches Reallexikon.* Tübingen, Mohr, 1937.

W. A. Gifford, *The Story of the Faith.* New York, Macmillan and Company, 1946.

Nelson Glueck, *The Other Side of the Jordan.* New Haven, American Schools of Oriental Research, 1940.

Nelson Glueck, *The River Jordan.* Philadelphia, Westminster Press, 1946.

C. C. McCown, *The Ladder of Progress in Palestine.* New York and London, Harper and Brothers, 1943.

Carl Watzinger, *Denkmäler Palästinas,* 2 Vols. Leipzig, J. C. Hinrich, 1933 and 1935.

Carl Watzinger, *Phönikien und Palästina,* in Otto's *Handbuch der Archäologie.* Munich, C. H. Beck, 1939.

G. E. Wright and F. V. Filson, *The Westminster Historical Atlas to the Bible.* Philadelphia, Westminster Press, 1945.

Prehistoric Periods

Dorothy A. E. Garrod and Dorothea Bate, *The Stone Age of Mount Carmel,* Vol. 1: *Excavations at Wady el-Mughara.* Oxford, Clarendon Press, 1937.

John Garstang and J. B. E. Garstang, *The Story of Jericho.* London, Hodder and Stoughton, 1940.

T. D. McCown and Sir Arthur Keith, *The Stone Age of Mount Carmel,* Vol. 2: *The Fossil Human Remains from the Levalloiso-Mousterian.* Oxford, Clarendon Press, 1939.

A. Moortgat, "Die Entstehung der sumerischen Hochkultur," in *der Alte Orient,* Vol. 43, 1945.

H. Ranke, "The Beginnings of Civilization in Egypt," in a supplement to the *Journal of the American Oriental Society,* Dec. 1939.

A. Scharff, *Die Frühkulturen Aegyptens und Mesopotamiens: ein Vertrag.* Leipzig, J. C. Hinrich, 1941.

E. A. Speiser, "The Beginnings of Civilization in Mesopotamia," in a supplement to the *Journal of the American Oriental Society,* Dec. 1939.

E. L. Sukenik, "A Chalcolithic Necropolis at Hederah," in the *Journal of the Palestine Oriental Society,* Vol. 17, 1937, pp. 15 ff.

F. Turville-Petre, "Excavations in the Mugharet el-Kebarah," in the *Journal of the Royal Asiatic Society,* Vol. 62, 1932, pp. 271 ff.

F. Turville-Petre, *Researches in Prehistoric Galilee,* London, British School of Archaeology at Jerusalem, 1927.

G. E. Wright, "*Palestine in the Chalcolithic Age,*" in the *Bulletin of the American Schools of Oriental Research,* Vol. 66, 1936, pp. 21 ff.

See also the publications on Jericho and Megiddo listed under the Bronze Age.

The Bronze Age

W. F. Albright, "*The Chronology of West Asia before 1500 B.C.,*" in the *Bulletin of the American Schools of Oriental Research,* Feb. 1940, pp. 25 ff.

W. F. Albright, Articles on Jericho, in the *Annual* and *Bulletin of the American Schools of Oriental Research,* between 1924 and 1939.

W. F. Albright, Reports and articles on Tell Beit Mirsim, in the *Annual* and *Bulletin of the American Schools of Oriental Research,* and in the *Journal of the Palestine Oriental Society,* between 1926 and 1943.

R. M. Engberg, *The Hyksos Reconsidered.* University of Chicago Press, 1939. (*Oriental Institute Studies,* no. 18.)

R. M. Engberg and G. M. Shipton, *Notes on the Chalcolithic and Early Bronze Age Pottery of Megiddo.* University of Chicago Press, 1934. (*Oriental Institute Studies,* no. 10.)

C. S. Fisher, Alan Rowe and G. M. FitzGerald, Reports on Beth-Shan, in the University of Pennsylvania *Museum Journal,* in *Publications of the Palestine Section of the Museum of the University of Pennsylvania* and in the *Palestine Exploration Quarterly,* between 1922 and 1939.

C. S. Fisher, P. L. O. Guy et al., Reports on Megiddo, in *Communications* and *Publications of the Oriental Institute,* University of Chicago Press, between 1929 and 1939.

E. O. Forrer, "*The Hittites in Palestine,*" in the *Palestine Exploration Fund Quarterly Statement,* 1936, pp. 190 ff. and 1937, pp. 100 ff.

John Garstang, Reports on Jericho, in the *Annals of Archaeology and Anthropology,* between 1932 and 1936.

Elihu Grant, *Ain Shems Excavations,* 5 Vols. Haverford, Biblical and Kindred Studies, 1931-39.

Elihu Grant, *Beth-Shemesh* (Ain Shems). Haverford, Biblical and Kindred Studies, 1929.

R. W. Hamilton, "*Tell Abu Hawam,*" in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 3, 1934, pp. 74 ff. and Vol. 4, 1935, pp. 1 ff.

E. Henschel-Simon, "*The 'Toggle-pins' in the Palestine Archaeological Museum,*" in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 6, 1936-38, pp. 169 ff.

E. E. Herzfeld, *Iran in the Ancient East.* London, Oxford University Press, 1941. (Chapters 1 and 2.)

C. N. Johns, *"Athlit,"* in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 2, 1933, pp. 41 ff.

Helene Kantor, *"The Early Relations of Egypt with Asia,"* in the *Journal of Near Eastern Studies,* Vol. 1, 1942, pp. 174 ff.

R. A. S. Macalister, *The Excavation of Gezer,* 3 Vols. London, Murray, 1912.

A. Mallon, *Teleilat Ghassul,* 2 Vols. Rome, Institut Biblique Pontifical, 1934, 1940.

P. Montet, *Byblos et l'Égypte,* 2 Vols. Paris, Geuthner, 1928, 1929.

A. Moortgat, *"Ein Basaltidol aus churrischem Bereich,"* in the *Zeitschrift für Assyriologie,* Vol. 41, 1933, pp. 209 ff.

Valentin Mueller, *Frühe Plastik in Griechenland und Vorderasien.* Augsburg, Filser, 1929.

Sir W. M. F. Petrie, *Ancient Gaza* (Tell el Ajjul), 4 Vols. London, British School of Archaeology in Egypt, 1931-1934, (Petrie's conclusions are not dependable but the material in this and in the two following works is important).

Sir W. M. F. Petrie, *Beth-pelet* (Tell el-Farah), 2 Vols. London, British School of Archaeology in Egypt, 1930, 1932.

Sir W. M. F. Petrie, *Gerar* (Tell Jemmeh). London, British School of Archaeology in Egypt, 1928.

E. Piltz, *"Die weiblichen Gottheiten Kanaans,"* in the *Zeitschrift des deutschen Palästina-Vereins,* Vol. 47, 1924, pp. 129 ff.

S. Przeworski, *Die Metallindustrie Anatoliens in der Zeit von 1500-700 vor Chr.* Leiden, E. J. Brill, 1939.

Alan Rowe, *Catalogue of Egyptian Scarabs, Scaraboids, Seals and Amulets in the Palestine Archaeological Museum.* Cairo, Institut Français, 1936.

Ernst Sellin, *"Tell Taannek,"* in *Denkschriften der Akademie der Wissenschaften* (Vienna), *Philosophisch-historische Klasse,* Vol. 50, 1904, Part IV.

L. H. Vincent, Articles on Jericho, in the *Revue Biblique,* between 1930 and 1939.

G. E. Wright, *The Pottery of Palestine from the Earliest Times to the End of the Early Bronze Age.* New Haven, American Schools of Oriental Research, 1937.

G. E. Wright, *"Epic of Conquest,"* in the *Biblical Archaeologist,* Vol. 3, 1940, pp. 25 ff.

See also the reports on Tell ed-Duweir (Lachish) listed under the Iron Age.

The Iron Age

The Bible: Old Testament, Authorized Version.

G. Bonfante, *"Who were the Philistines?"* in the *American Journal of Archaeology,* Vol. 50, 1946, pp. 251 ff.

J. W. Crowfoot, Kathleen Kenyon and E. L. Sukenik, articles on Samaria in the *Palestine Exploration Quarterly,* between 1932 and 1935.

David Diringer, *"The Origins of the Alphabet,"* in *Antiquity,* Vol. 17, 1943, pp. 77 ff.

M. Dunand, *Fouilles de Byblos,* Vol. I. Paris, Geuthner, 1937, 1939.

René Dussaud, *Les Découvertes de Ras Shamra (Ugarit) et l'Ancien Testament,* 2nd Edition. Paris, Geuthner, 1941.

G. A. Eisen, *Ancient Oriental Cylinder and other Seals in the Moore Collection. Oriental Institute Publications* (University of Chicago), Vol. 47, 1940.

J. W. Flight, *"The Present State of Studies in the History of Writing,"* in the *Haverford Symposium.* (ed., E. Grant), pp. 111 ff. New Haven, American Schools of Oriental Research, 1938.

Arne Furumark, *The Chronology of Mycenaean Pottery.* Stockholm, Pettersons, 1941, pp. 116-122.

A. H. Gardiner, *"Writing and Literature,"* in the *Legacy of Egypt* (ed. S. R. K. Glanville), pp. 53 ff. Oxford, Clarendon Press, 1942.

Cyrus H. Gordon, *West Asiatic Seals in the Walters Gallery,* in *Iraq,* Vol. 6, 1939, pp. 3 ff.

A. M. Honeyman, *"Pottery Vessels of the Old Testament,"* in the *Palestine Exploration Quarterly,* 1939, pp. 76 ff.

J. L. Kelso, *The Ceramic Vocabulary of the Old Testament.* New Haven, American Schools of Oriental Research, 1948.

C. C. McCown, et al., *Tell en-Nasbeh,* 2 Vols. New Haven, American Schools of Oriental Research, 1947.

H. H. von der Osten, *Ancient Oriental Seals in the Newell Collection* and *in the Brett Collection. Oriental Institute Publications* (University of Chicago), Vol. 22, 1934 and Vol. 37, 1936.

Sir W. M. F. Petrie, *Researches in Sinai.* New York, Dutton, 1906.

B. Pritchard, *Palestinian Figurines in Relation to Certain Goddesses Known through Literature.* New Haven, American Oriental Society, 1943.

G. A. Reisner, et al., *Harvard Excavations at Samaria,* 2 Vols. Cambridge, Harvard University Press, 1924.

Alan Rowe, *Catalogue of Egyptian Scarabs, etc.,* as listed under the Bronze Age.

O. R. Sellers, *The Citadel of Beth-Zur.* Philadelphia, Westminster Press, 1933.

J. L. Starkey and C. H. Inge, reports on Tell ed-Duweir (Lachish) in the *Palestine Exploration Quarterly,* 1933-38.

H. Torczyner, et al., *Lachish,* 2 Vols. London, Oxford University Press, 1938, 1940.

Carl Watzinger, *Tell el-Mutesellim* (Megiddo), Vol. 2. Leipzig, J. C. Hinrich, 1929.

G. E. Wright, a Revised Chronology of Beth-Shan, a book review in the *American Journal of Archaeology,* Vol. 45, 1941, pp. 483 ff.

G. E. Wright, *Iron, The Date of its Introduction into Common Use in Palestine,* in the *American Journal of Archaeology,* Vol. 43, 1939, pp. 458 ff.

See also the reports and articles on Jericho, Tell Beit Mirsim, Beth-Shan, Ain Shems, Megiddo, Gezer, Tell Abu Hawam, Tell Jemmeh, Tell el-Farah and Tell el-Ajjul, listed under the Bronze Age.

Hellenistic, Roman and Byzantine

M. Avi-Yonah, *Oriental Elements in Palestine Art,* in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 10, 1940-42, pp. 105 ff.

D. C. Baramki, *Coins in the Palestine Archaeological Museum,* in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 8, 1938-39, pp. 77 ff.

D. C. Baramki, *Note on a Cemetery at Karm al-Shaikh, Jerusalem,* in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 1, 1932, pp. 3 ff.

H. C. Beck, *Etched Carnelian Beads,* in the *Antiquaries Journal,* Vol. 13, 1933, pp. 384 ff.

The Bible, Authorized Verson (including the Apocrypha).

Campbell Bonner, *Magical Amulets,* in the *Harvard Theological Review,* Vol. 39, 1946, pp. 25 ff.

Louis Bréhier, *La Sculpture et les Arts mineurs byzantins.* Paris, Editions d'Art et d'Histoire, 1936.

British Museum, *Guide to Greek and Roman Life,* 3rd Edition. London, 1929.

Dorothy Burr, *Terracottas from Myrina in the Museum of Fine Arts, Boston.* Vienna, Adolf Holzhausens Nachfolger, 1934. (p. 57, no. 63.)

John D. Cooney, *Pagan and Christian Egypt.* New York, Brooklyn Museum, 1941. (Has useful parallels for some of our bronzes, particularly the bronze censers, nos. 85, 87.)

J. W. Crowfoot and G. M. FitzGerald, *Excavations in the Tyropean Valley, Jerusalem,* in the *Annual of the Palestine Exploration Fund,* Vol. 5, 1929.

O. M. Dalton, *Catalogue of Early Christian Antiquities,* 1st Edition. London, British Museum, 1901.

C. C. Edgar, *Greek Bronzes,* in the *Catalogue Général* of the Egyptian Museum, Cairo, 1904.

G. A. Eisen, *Lotus- and Melon-Beads,* in the *American Journal of Archaeology,* Vol. 34, 1930, pp. 20 ff.

Poul Fossing, *Glass Vessels before Glass-Blowing.* Copenhagen, E. Munksgaard, 1940.

Kurt Galling, *Die Beleuchtungsgeräte im israelitisch-jüdischen Kulturgebiet,* in the *Zeitschrift des deutschen Palästina-Vereins,* Vol. 46, 1923, pp. 1 ff.

R. P. Griffing, *An Early Christian Ivory Plaque from Cyprus and Notes on the Asiatic Ampullae,* in the *Art Bulletin,* Vol. 20, 1938, pp. 277 ff.

Charles Guignebert, *The Jewish World in the Time of Jesus.* London, Kegan Paul, 1939.

R. W. Hamilton and S. A. S. Husseini, *Shaft Tombs on the Nablus Road,* in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 4, 1934, pp. 170 ff.

D. B. Harden, *Ancient Glass,* in *Antiquity,* Vol. 7, 1933, pp. 419 ff.

D. B. Harden, *Roman Glass from Karanis,* in *University of Michigan Studies, Humanistic Series,* Vol. 41, 1936.

F. M. Heichelheim, *Wirtschaftsgeschichte des Altertums,* 2 Vols. Leiden, A. W. Sijthoff, 1938.

G. F. Hill, *Catalogue of the Greek Coins of Palestine.* London, British Museum, 1914.

W. B. Honey, *Glass* (Victoria and Albert Museum Handbook), Chapters 2 and 3. London, Shenval Press, 1946.

G. and A. Horsfield, articles on Petra and Nabataean pottery, in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 7, 1938, pp. 1 ff., Vol. 8, 1938-39, pp. 87 ff., Vol. 9, 1941, pp. 105 ff.

J. H. Iliffe, articles in the *Quarterly of the Department of Antiquities in Palestine,* between 1932 and 1941.

W. Van Ingen, *Figurines from Seleucia.* Ann Arbor, University of Michigan Press, 1939.

Ernst Kitzinger, *Early Mediaeval Art in the British Museum.* London, British Museum, 1940. (Chapter I.)

Carl H. Kraeling (editor), *Gerasa, City of the Decapolis.* New Haven, American Schools of Oriental Research, 1938.

Winifred Lamb, *Greek and Roman Bronzes.* London, Methuen, 1929.

C. Lambert, *Coins in the Palestine Museum,* in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 1, 1932, pp. 70 ff. and 130 ff.

Marion Lawrence, *The Sarcophagi of Ravenna.* New York, College Art Association, 1945. (Page 29 contains a list of recently published discussions of the lead coffins.)

H. Leclercq, *Ampoules,* in the *Dictionnaire d'Archéologie chrétienne,* Vol. 1, part 2, 1924, Cols. 1722 ff.

F. H. Marshall, *Catalogue of the Jewellery, Greek, Etruscan and Roman.* London, British Museum, 1911.

C. R. Morey, *Early Christian Art.* Princeton University Press, 1942.

M. Narkiss, *The Snuff Shovel as a Jewish Symbol,* in the *Journal of the Palestine Oriental Society,* Vol. 15, 1935, pp. 14 ff.

W. M. F. Petrie, *Amulets.* London, Constable and Company, 1914.

A. Reifenberg, *Ancient Jewish Coins,* 2nd Edition. Jerusalem, Rubin Mass, 1947.

A. Reifenberg, *Denkmäler der jüdischen Antike.* Berlin, Schocken Verlag, 1937.

A. Reifenberg, *Jüdische Lampen,* in the *Journal of the Palestine Oriental Society,* Vol. 16, 1936, pp. 166 ff.

S. Reinach, *Répertoire de Reliefs Grecs et Romains.* Paris, Leroux, 1912. (Vol. 2, p. 339.)

G. M. A. Richter, *Greek, Etruscan and Roman Bronzes.* New York, Metropolitan Museum of Art, 1915.

M. Rostovtzeff, *Caravan Cities.* Oxford, Clarendon Press, 1932.

M. Rostovtzeff, *A Social and Economic History of the Hellenistic World,* 3 Vols. Oxford, Clarendon Press, 1941. (Especially Vol. 3, notes and bibliography.)

C. G. Seligman, *The Roman Orient and the Far East,* in *Antiquity,* Vol. 11, 1937, pp. 5 ff.

H. L. Strack, *Introduction to the Talmud and Midrash.* Philadelphia, Jewish Publication Society of America, 1931.

J. Strzygowski, *Koptische Kunst,* in the *Catalogue Général* of the Egyption Museum, Cario, 1904. (Contains parallels for some of our Christian objects.)

E. L. Sukenik, *The Ancient Synagogue of El-Hammeh,* in the *Journal of the Palestine Oriental Society,* Vol. 15, 1935, pp. 101 ff.

E. L. Sukenik, *Ancient Synagogues in Palestine and Greece* (Schweich lectures, 1930). London, Oxford University Press, 1934.

E. L. Sukenik, *A History of Jewish Archaeology,* in *The Jewish People, Past and Present,* Vol. I, pp. 48 ff. New York, Marstin Press, 1946.

E. L. Sukenik, *Jüdische Gräber Jerusalems.* Jerusalem, Azriel Press, 1931.

H. B. Walters, *Catalogue of the Bronzes, Greek, Roman and Etruscan.* London, British Museum, 1899.

H. B. Walters, *Catalogue of the Greek and Roman Lamps.* London, British Museum, 1914.

Walters Art Gallery, *Early Christian and Byzantine Art.* Baltimore, 1947.

L. H. Vincent, *Sur la date des ossuaires juifs,* in the *Revue Biblique,* Vol. 43, 1934, pp. 564 ff.

Franz Winter, *Die Typen der figürlichen Terrakotten.* Stuttgart, Spemann, 1903. (pp. 371-2.)

See also the reports on Beth-Zur and Tell Abu Hawam listed under the Iron Age, and on Athlit, listed under the Arab periods.

The Arab and Turkish Periods

A detailed study of the Islamic periods is not within the scope of this handbook. For the historical background we list:

P. K. Hitti, *A History of the Arabs.* 3rd Edition. London, Macmillan and Company, 1946.

In support of dates given for the pottery of this section we list:

D. C. Baramki, *The Pottery from Khirbet el-Mefjer,* in the *Quarterly of the Department of Antiquities in Palestine,* Vol. 10, 1940-42, pp. 65 ff.

Elihu Grant, *Ain Shems Excavations,* Vol. 4, pls. 50 and 70, and Vol. 5, p. 148.

Walter Hauser and C. K. Wilkinson, *The Museum's Excavations at Nishapur,* in the *Bulletin of the Metropolitan Museum of Art,* April, 1942, pp. 89-90 (for a discussion of the "rose water bottles").

C. N. Johns, Reports on Athlit, in the *Quarterly of the Department of Antiquities in Palestine,* between 1932 and 1938.

F. W. Robins, *The Story of the Lamp.* London, Oxford University Press, 1939.

For Jewish art as exemplified in the Jewish manuscripts: Franz Landsberger, *A History of Jewish Art.* Cincinnati, Union of American Hebrew Congregations, 1946.

For the identification of the Christian manuscript we are chiefly indebted to Mr. R. W. Bailey of the British Foreign Service and to the Arab Library in Cairo.

Modern Palestine

Anglo-American Committee of Inquiry, 1946, *Report.* Washington, United States Government Printing Office, 1946.

Richard Crossman, *Palestine Mission: A Personal Record.* New York, Harper and Brothers, 1947.

Grace M. Crowfoot, Articles in the *Palestine Exploration Quarterly,* 1941, pp. 141 ff., 1944, pp. 121 ff., 1945, pp. 34 ff.

Bartley C. Crum, Behind the Silken Curtain: *A Personal Account of Anglo-American Diplomacy in Palestine and the Middle East.* New York, Simon and Schuster, 1947. (Both Crossman and Crum were members of the Anglo-American Committee, 1946.)

Gustav Dalman, *Arbeit und Sitte in Palästina,* 5 Vols. Gütersloh, Bartelsmann, 1928-37.

Esco Foundation for Palestine, *Palestine: A Study of Jewish, Arab and British Policies,* 2 Vols. New Haven, Yale University Press, 1947.

Karl Groeber, *Picturesque Palestine, Arabia and Syria: The Country, the People, and the Landscape* (*Orbis Terrarum* Series). New York, Brentano's, 1925.

T. H. Hendley, *Indian Jewellery.* London, abstracted from the *Journal of Indian Art,* 1906-09. Part VI, pp. 69 ff.

F. J. Jacoby and I. A. Abbady (editors), *The Anglo-Palestine Year Book,* 1946. London, Anglo-Palestine Publications, 1946.

M. von Oppenheim, *Die Beduinenstamme in Mesopotamien und Syrien.* Leipzig, Harrassowitz, 1939.

See also articles, reviews and chronology in all recent numbers of the *Middle East Journal,* and illustrated articles in recent numbers of the *Illustrated London News,* the *National Geographic Magazine* and *Life.*

INDEX

Abbasid caliphs, 67
Abraham, 8, 61
Acre, 68
Acts of the Apostles, 35, 63
Adze, 51
Aegean Sea, 8, 15, 19, 27, 33, 34, 37, 39
Aelia Capitolina, 34, 62
Africa, 4, 67, 89
  See also Egypt
Agate, 47
Agriculture, 5, 72-3, 80-3
Agrippa I (Herodian), 34
Ain Shems, 3, 29
Akkad, 7
Alabaster, 32, 64
Alabastra, 45, 64
Alexander the Great, 21, 33, 37, 61
Alexander Jannaeus, 61
Alexandria, 33, 35, 40, 45
Alphabet, *see* Writing
Altar, 42, 49, 63
Amber, 47
Amenophis III, 16
Amethyst, 47, 48
Amos, Book of, 83
Amphora (as decorative motif), 42, 62
Ampullae, *see* Pilgrim bottles
Amulets, 15, 16, 49, 60, 90
Anatolia, 89
  See also Asia Minor
Anchor, 61
Anglo-American Committee of Inquiry, 75
Animals, 5, 16, 27, 35, 42, 47, 55, 56, 80, 82
  See also Horse, Lion
Ankh (symbol of life), 49
Anklets, 89
Antelope, 16
Antioch, 35, 62
Antonius Felix, 61
Anvil, 51
Aphrodite, 40, 56, 57
Apis, 56
Arab Higher Committee, 75
Arab League, 75
Arab Periods, 41, 42, 66-70
Arabia, 67, 71, 75, 89
Arabic (language), 66, 69, 70, 71, 90
Arabs, 35, 36, 64, 66-70, 71-5
Aramaeans, 19, 31
Aramaic, 31, 59
Arcade, 40, 42, 54
Archaeology, 1-4
Ark, 62
Armlets, 47, 89
Arrowheads, 13, 14, 52-3
Artemis, 63
As, 62
Ashtoreth, 8, 26, 56
  See also Astarte
Asia Minor, 8, 19, 68
  See also Anatolia
Askalon, 63
Assur, 32, 39
Assur-nasr-pal, 32
Assyria, 20, 32, 87
Astarte, 40, 56, 57
  See also Ashtoreth
Athanodotos, 30
Athena, 62
Athens, 37
Attis, 55
Augur's wand, 61
Augustus, 63
Aurignacian culture, 5
Axes, 13, 14, 51, 65

Baba Metzia, 83
Babai, incantation bowl of, 31
Babylon, 21, 33
Babylonia, 14, 20, 30
Baghdad, 67
Baking, *see* cooking
Balfour Declaration, 73
Baluah, 29
Barbotine, 38
Bar-Kokhba, 31
Barley, 61, 81
Basalt, 83
Baskets, 79, 83
Beads, 5, 47-9, 60, 90
Bedouin, 72, 84-6, 88
See also nomads
Beetles, scarab, 15-17, 27, 46, 49,
stag, 90
Beirut, 73
Beisan, *see* Beth-Shan, 3
Bellerophon, 49
Belts, 84
Bethlehem, 72, 86
Beth-Shan (Beisan), 3
Beth-Zur, 3
Bible, 1, 4, 21, 24-7, 30, 35, 39, 51, 52, 61, 63, 77, 78, 80-3, 87, 88
See also New Testament
Birds, 27, 39, 40, 42, 44, 56, 57, 79
Boar's tusks, 90
Boats, *see* ships
Bone, 13, 47, 50, 55, 56, 90
Bracelets, 28-29, 47, 54, 89-90
Braziers, 76-9
Bread, 11, 77-9
Bricks, 18, 72,
Babylonian glazed, 32
Britain, 73-5
British Mandate, 2, 74-5
Bronze, earliest use of, 7
tools and weapons, 13-15
in the Iron Age, 19, 26, 27
figurines, 26, 27, 55-6
coins, 31, 60-4
vessels, 43-5, 56-7
costume accessories, 15, 46-7
toilet articles, 49-51
hasps, 53
keys, 54
magic hand, 64
Bronze Age, 7-18, 21-4, 28, 43, 47-8, 50-2, 88, 90
Brooches, *see* fibulae
Broom (for threshing), 82
Brush (for writing), 28, 30
Bulls, 56
Burial customs, 5, 49, 58-60
Byblos, 7, 29
Byzantine Empire, 36, 66, 68
Byzantine Period, 35-6, 38-43

Caesaraea, 62, 63
Cairo, 73, 89
Caliphate, 66-8
Camel, 55, 80, 83
hair, 85
hide, 85
Canaanite Script, 29-31
Canaanites, 20, 26
Candlestick, *see* Seven-branched candlestick
Caps, 85-7
Carmel, *see* Mount Carmel
Carnelian, 27, 47-8
Caves, 5
Censers, 45, 57, 69
Cereals, 72
See also Wheat, Barley, Sorghum
Chalcolithic period, 3, 5, 6
Chaldea (New Babylonian Empire), *see* Babylonia
Chalice (as motif on coins), 62
Charcoal, 76-7
Chariot, 7, 56
Charlemagne, 67
Charles the Great, *see* Charlemagne
Charms, 90
See also Amulets, Spells

Chellean culture, 6
Chemicals, 72
Chinese, 64
Chisels, 13
Christ, 35, 44, 67
Christianity, 35-6, 39-40, 42-4, 49, 57-8, 60, 65-8, 70-1
Chronicles, First Book of, 82
Second Book of, 26
Churchill White Paper, 73-4
Citrus cultivation, 73
Cloth, *see* Textiles
Clothing, *see* Costume
Clogs, 86
Codex, 70
Coffins, 59-60
Coins, 31, 60-4, 86-7
Colonization, 71-5
Column, papyrus (amulet), 49
Commerce, *see* Trade
Condiments, 53
Constantine, 36
Constantinople, 68
Cooking, 24, 25, 38, 77-9
Copper, 5, 6, 7, 13-15, 43, 46, 47, 49
Coral, 89
Core, in manufacture of glass vessels, 45
in "lost wax" process, 55
Corinthians, First Epistle of Paul to the, 50, 57
Corn, *see* Grain
Cornucopiae, 61
Cosmetics, 25, 37, 44, 50-1, 53
Costume, 15, 46-9, 54, 55, 84-90
Cotton, 84-8
bow, 87
Cow, 80
Cowrie, *see* Shells
Cremation, 58
Crescents, 90
Crete, 8, 19
Cross, 40, 42-4, 49, 57, 60
Cross-bow, 53
Crusades, 67-70
Crystal, 47
Cuneiform, 6, 8, 28-30
Cupid, *see* Eros
Cymbals, 57
Cyprus, 8, 10, 11, 13, 17, 21-4
Cyrus the Great, 21

Daggers, 13, 14, 53, 80
Damascus, 20, 67, 73, 89
Daric, 60
Date (fruit), 46, 61
David, 20, 22, 24, 51
Dead Sea, 72
Deities, 8, 17, 26, 36, 39, 40, 43, 49, 50, 54-8, 63
Delilah, 25
Delos, 33
Demons, 31
Denarius, 61-2, 64
Deuteronomy, Book of, 70
Diamond cutting, 72
Diana, 63
Diocletian, 49
Dionysos, 39, 43, 56, 65
Dolphin, 44
Domitian, 62
Donkeys, 83
Doves, 40, 42, 57
Drachma, 62
Dress, *see* Costume
Dung, 77-8, 82
dung-catcher, 82
Dyes, 85

Eagle, 44
Earrings, 47, 89
Education, 73, 75
Eggs, 53
Egypt, in the prehistoric periods, 5-6
in the Bronze Age, 7-8, 11, 13-18, 28-9, 32, 83
in the Iron Age, 19-20, 26-7
in the Graeco-Roman periods, 33, 35, 40, 45, 48-9, 56, 61, 64, 87

in the Arab periods, 67, 68
in modern times, 75
Elijah, 24
Embroidery, 86
Ephesus, 33, 63
Ephron, 61
Eros, 54, 56, 57
Esdraelon, Plain of, 3, 72
Esther, Book of, 70
Ethrog, 62
Europe, 4, 6, 67, 68, 75
Excavation, 1-4
Exile, Babylonian, 20-1, 31, 32
Exodus, Book of, 21, 25, 35, 57, 63
Eye-paint, *see* Cosmetics
Ezekiel, Book of, 25, 87

Faience, 11, 18, 28, 48
Falcon, 56
Fatimid caliphs, 67
Feeding bottles, 38
Felt, 86-7
Fez, 85-6
Fibulae, 15, 46
Figurines, 17, 26-7, 54-6
First Revolt, 31, 34, 62, 63
Flax, 25, 88
See also Linen
Flour, 80, 83-4
Flowers (as motif on coins), 62
Forks, 53
threshing, 82
winnowing, 82-3
France, 67, 68, 73
Frederick II, 68
Frit, 25
See also Faience
Fuel, 76-9

Galilee, 2, 3, 34-5, 63, 86
Garment pins, *see* Pins
Gaza, 63
Gebal, 29
Gems, 17
Genesis, Book of, 61
Gerasa, 3, 44
Gezer, 3
Gilding, *see* Gold
Gipsies, 84
Girdles, 84-8
Girizim, *see* Mount Girizim
Glass, Egyptian, 18
vessels, 45-6, 51
spindlewhorl, 25
bracelets, 47
beads, 48
amulets, 49
mirrors, 50
Glaze, 15, 32, 48, 69-70
See also Faience
Gnosticism, 65
Goad, 81
Goats, 56
hair, 25, 84-5, 88
Gods, *see* Deities
Godfrey of Bouillon, 67
Gold, garment pin, 15
as gilding, 46
jewellery, 47, 48
coins, 60-2, 70
Grain, 23, 24, 79-83
bins, 79-80
Granaries, *see* Grain bins
Grapes, 48
See also Viticulture
Great Britain, 73-5
Greece, 1, 8, 17, 19-22, 37, 40, 41, 50, 67
Greeks, 21, 28, 30, 33, 37, 41, 51, 52, 55, 64, 66, 88
script, 28, 30, 40, 42, 59, 63
language, 36, 87
Grinding, *see* Mill
Groats, 83
Gut, 83

Hadrian, 34, 62
Hammers, 13
Handmills, *see* Mills

Hands, as amulets, 49, 90
of Sabazios, 64
Hanukkah, 42
Harrow, 81
Harun ar-Rashid, 67
Harvesting, 81-3
Hasps, 53
Hatchet, 51
Hathor, 17, 29
Headbands, 85
Headcloths, 85, 87, 88
Hearths, 76, 77
Hebrews, 3, 9, 20-32
See also Jews
Script, 30-1, 61, 63, 70
Hellenistic Period, 25, 33-6, 47-56, 60, 64
Herod Agrippa I, *see* Agrippa I
Herod Antipas, 63
Herod the Great, 34, 63
Herodian princes, 34, 61, 63
Hieroglyphic, 6, 8, 16, 28-9
Hittites, 8, 14, 19
Hoe, 81
Holy Ghost, 40
Honey, 24
Hoods, 86, 87
Horse-hair, 84
Horsemen, 27, 49
Horses, 7, 27, 49, 56, 72
Horus, 49, 56
eye of (amulet), 49
Hosea, Book of, 25, 78
Houses, 6, 59, 72, 76, 77, 79-80
Huleh, Lake, 2
Human beings (in art), 21, 23, 35, 63, 79, 90
See also Figurines, Masks
Hurrians, 8, 17
Hussein-McMahon letters, 73
Hyksos, 7-11, 13, 14, 16, 26
Hyrcanus, (Hyrcanus II), 34
John Hyrcanus, 31, 61

Ibexes, 56
Immigration, 19-20, 71-5
Implements, 5, 6, 7, 12, 13, 19, 51-2
for writing, 28, 32
Incantation bowls, 31, 65
Incense, 45, 57
India, 67, 89
Indo-Europeans, 8, 19
Industrialization, 4, 72-3
Iraq, 75
Iron, 14, 19, 47, 51-4, 78-82
Iron Age, 14, 19-32, 42, 48, 57, 88
Irrigation, 72
Isaiah, Book of, 52, 78, 80, 82, 83, 87, 90
Ishtar, 8
Isis, 50, 56
Islamic religion and culture, 66-8
See also Moslems
Israel, Ancient, 20, 30, 31
Modern, 75
Israelites, *see* Hebrews
Italy, 39, 64, 67, 68, 73
Ivory, 47

Jaffa, 63
Jannaeus, *see* Alexander Jannaeus
Jasper, 30, 47
Javelins, 14, 53
Jehovah, *see* Jahweh
Jerash, *see* Gerasa
Jeremiah, 3
Book of, 24, 25, 27, 77, 80, 82
Jericho, 3
Jeroboam II, 30
Jerusalem, 3, 20, 31, 33, 34, 61, 62, 63, 66, 67, 68, 70, 71
Jet, 47, 48
Jewellery, 18, 46-9, 89-90
Jews, 31, 33-6, 40, 42, 49, 57-65, 66, 68, 70-5, 89
Yemenite, 70, 71, 89
religion of, 4, 21, 26-7, 34-5, 42-3, 56-9, 62, 70
Job, Book of, 25
John Hyrcanus, 31, 61

Jordan River, 2, 3, 20, 72
Jordan Valley, 3, 72, 84
Joseph, 18
Judaea, 34, 35, 61-3
Judah, 20, 21, 31, 59
Judges, Book of, 25
Juno, 39

Kelim, 83
Keys, 54
Khurrians, *see* Hurrians
Kings, First Book of, 24, 26, 87
  Second Book of, 24, 25, 26
Kiriath-Sepher, 3
Knives, 13, 52, 53
Knucklebones, 90
Kohl (eyepaint), 25, 50
  sticks, 50
Koran, 76

Lachish, 3, 30
Lambs, 42
Lamps, of the Bronze Age, 24
  of the Iron Age, 24, 25
  of the Hellenistic period, 24, 40-43
  of the Roman period, 41-3, 57, 58
  of the Byzantine period, 41-5
  of the Arab periods, 41-2, 69-70
Lances, 13, 72
Land Transfers Regulations, 74-5
Language, *see* Semitic, Greek, Latin, Arabic
Lanterns, 69
Lathe, 43
Latin (language), 30, 63
Lead, 46, 51, 59-60, 70
League of Nations, 73-4
  Mandate, *see* British Mandate
Leather, 70, 84-6
Lebanon, 75
Legionaries, 46
Lepton, 62
Leviticus, Book of, 78
Limestone, 13, 14, 25, 51, 58, 59
Linen, 25, 32, 86-8
Lion, 30, 32
Looms, 25, 84, 88, 89
"Lost wax" process, 26, 55-6
Louis IX, 68
Luke, the Gospel according to, 47, 87
Lulab, 62
Luristan, 26
Lyre, 62

Maccabees, 31, 34, 61, 63
Mace, 13, 14
MacDonald Letter, 74
Macedonia, 21, 33, 61
Magic, 31, 64, 65, 90
Mahlaphta (name on incantation bowl), 31
Makka, *see* Mecca
Mamluks, 68
Mandaeism, 65
Mandate, League of Nations, *see* British Mandate
Manuscripts, 68, 70
Marble, 16, 59
Mark, the Gospel according to, 64, 82, 87
Masks, 39, 42, 43, 44, 56
Matthew, the Gospel according to, 43, 83
Meal, *see* Flour
Mecca, 67
Medina, 67
Mediterranean Sea, 4, 8, 10, 19, 37, 39, 45, 67, 89
Megiddo, 3, 30
Megillah, 70
Menachoth, 43
Menas, *see* St. Menas
Menorah, *see* Seven-branched candlestick
Mercenaries, 19, 21
Mesolithic period, 5
Mesopotamia, in the prehistoric periods, 5-6
  in the Bronze Age, 7-9, 13, 16,

17, 28, 32
in the Iron Age, 20, 32, 69
in the Roman period, 65
Metalwork, 17, 70, 71, 86, 89-90
See also copper, bronze, iron, gold, silver, lead, niello
Micah, Book of, 26
Mills, 82-3
Minoan, *see* Crete
Mirrors, 44, 49-50
Mishnah, 21, 35, 43, 64, 83, 87
Mitanni, 8
Moab, 81
Modern Palestine, 71-90
Mohammed, *see* Muhammad
Mohammedan, *see* Moslem, Islamic
Money, *see* Coins
Mongols, 67, 68
Monotheism, 27
Moors, 67, 68
Moses, 18, 67, 70
Books of, *see* Genesis, Exodus, Leviticus, Numbers
See also Pentateuch, Torah
Moslems, 66-8, 71
See also Islamic
Mother-of-pearl, 86
Moulds, for metal, 15, 46, 54, 55, 60
for pottery, 17, 27, 37-9, 41, 55
for glass, 46
Mount Carmel, 2
Mount Girizim, 63
Muhammad, 66, 68
Muhammadan, *see* Moslem, Islamic
Mules, 80, 83
Mycenaean, 8, 10, 11, 19, 22
Mystery religions, 36, 56, 64-5

Nabataeans, 3, 35, 38-9, 66
Nationalism, 73
Neapolis, 63
Nebuchadrezzar, 20, 32
Necklaces, 47, 54, 89
Needles, 51
Neo-Babylonia (New Babylonian Empire), *see* Babylonia
Neolithic period, 3, 5
Nero, 61
New Stone Age, *see* Neolithic period
New Testament, 30, 36, 39, 43, 47, 50, 57, 63, 64, 82, 83, 87, 88
Nicopolis, 63
Niello, 46
Nimrud, 32
Nomads, 35, 72
Numbers, Book of, 83

Offerings, funerary, 2, 58, 60
votive, 27, 29, 56, 58, 59
Oil, *see* Olive oil
Ointments, 50, 64, 89
See also Unguents
Old Stone Age, *see* Palaeolithic period
Old Testament, *see* Bible
Olives, 72
oil, 8, 11, 23-5, 40, 41, 51, 76
Orthodox Eastern Church, 70, 71
Osiris, 50, 56
Ossuaries, 58-9
Ottoman Turks, 68
Ovens, 77-8
Oxen, 55, 80

Paganism, 36, 39, 40, 49-50, 54-8, 60, 63-5, 66
Painting, 17, 79
on Greek vases, 64
Palaeolithic period, 2, 5, 6
Pallette, for cosmetics, 25
Palm, 42, 61, 62
Palmette, 44
Pan's pipes, 54
Paper, 64, 70, 90
See also Papyrus
Papyrus, 16, 28, 32, 64
column (amulet), 49

Parchment, 64
Parthians, 34, 35
Partition, 74
Passfield White Paper, 74
Peacock, 39
Peel Report, 74
Pens, 64
Pentateuch, 32
See also Moses, Torah
Perfume, 23, 37, 44, 45, 51, 69, 89
Persia, 21, 34-6, 60-1, 66, 67, 86
Peter, First Epistle of, 47
Petra, 3, 39
Petrie, Sir Flinders, 2, 3
Phallic amulets, 49
Phanebal, 63
Pharisees, 34
Philistines, 19-23, 51, 63
Phoenicia, 8, 19-21, 25, 61-3
Phoenician script, 28-31
Picks, 51
Pilate, Pontius, 61
Pilgrim bottles, 10-11, 24, 37, 39-40
Pilgrims, 67
Pins, prehistoric, 5
straight garment pins, 15, 46
fibulae, 15, 46
hairpins, 46
breastpins, 89
Plows, 52, 80-1
Polycandela, 41-2
Pontius Pilate, 61
Poppyhead, 61
Population, 71
Pottery, archaeological value of, 2
figurines, 17, 26-7, 54-5
vessels, *see* Pottery vessels, rattles, 27
Pottery vessels, Neolithic, 5
Chalcolithic, 5, 6
of the Bronze Age, 9-11, 21
of the Iron Age, 21-25
of the Hellenistic period, 30, 36-8, 40-3
as writing base, 30, 31
of the Roman period, 36-43
of the Byzantine period, 38-43
of the Arab periods, 68-70
modern, 75-80
Prehistoric periods, 5, 6, 47, 51
Printing, Jewish, 70
Procurators of Judaea, 61, 63
Prophets, 3, 24, 26
Proverbs, Book of, 25
Pruning hooks, 51, 52
Psalms, Book of, 25
Ptolemaic kings, 33, 56, 61
Public health, 73
Pyramids, 7

Quadrans, 62
Quarrels (weapon), 53
Quartz crystal, 47
Quota system, 74

Rabbinical study, 35, 63
Ramallah, 76, 86
Ramesses III, 19
Rapiers, 14
Ras Shamra, 29
Rattles, 27
Rawhide, 83
Reaping, 82
Recreation, 73
Religion, in the Bronze Age, 8, 16, 17
in the Iron Age, 21, 26-7, 31-2
in Graeco-Roman times, 33-6, 39-40, 42-3, 58, 60-5
in the Arab periods, 66-8, 70
in modern Palestine, 71, 76
See also Jewish, Islamic, Paganism, Christianity
Revelation, Book of, 39, 88
Revolt, *see* First Revolt, Second Revolt
Rhodes, 30, 31, 34, 37
Rings, 15, 17, 27, 46-7, 89
nose, 89
Ritual, 27, 32, 43, 56-8
Roman emperors, 34, 36, 61-4

Roman Period, 3, 28, 34-65, 69, 79, 87-8
Rome, 1, 30, 30-6, 46, 51, 58, 61-5
Rosette, 42, 48
Ruth, Book of, 82

Sabazios, 64-5
Sacks, 83, 88
Sadducees, 34
St. Augustine, 39
St. George, 49
St. Menas, 40
St. Paul, 50
Saladin, 68
Saljuq Turks, 67
Salve, *see* Ointment
Samaria, 3, 20, 30, 31, 63, 86
Samaritans, 20, 31-2, 70
Samson, 25
Samuel, First Book of, 24, 51, 81
  Second Book of, 57, 82
Sanctuary, 40, 42, 54, 56
Sandals, 85-6, 87
Sarcophagi, 59
Sasanians, 35-6, 49, 66-7
Saudi Arabia, 75
Saul, 24
Scarabs, 15-17, 27, 46, 49
Science, 73
Scimitar, 14
Scripts, *see* Writing
Scrolls, 70
Sculpture, 17, 18, 32
Seals, of the Bronze Age, 15-17
  of the Iron Age, 27, 30
  of the Roman period, 46, 49
Sebaste, 63
Second Revolt, 31, 34, 62, 63
Seleucid kings, 33, 34, 61
Semitic, languages, 7-9, 19-20, 28, 66
  figurines, 17
  scripts, 29-32
  See also Hebrew, Aramaic, Phoenician, Samaritan, Arabic
Septuagint, 30
Serabit el-Khadem, 28, 29
Serapis, 50, 56
Seven-branched candlestick, 42, 43, 59
Shabbath, 43, 87
Shechem, 63
Shekel, 31, 61, 62
Shell (material), 47
Shells, 42, 44, 48
Shema (seal), 30
Ships, 7, 23, 62
Shoes, 85-7
Shofar, 42
Shovels, ritual, 57
  for threshing and winnowing, 82
Shrine, *see* Sanctuary
Sicily, 67, 68
Sickles, 5, 13, 51, 81-2
Sieves, 83-4, 88
  See also Strainers
Sifting, 83-4
Siglos, 60
Silk, 85, 88
Silver, 46, 50, 53, 60-2, 70, 89, 90
Simon Bar-Kokhba, *see* Bar Kokhba
Sinai, 28, 29
Situlae, 43, 56
Skullcaps, 85
Sling bullet, 51
Snails, 53
Snuff dishes, 57
Social services, 73
Solomon, 20
  Song of, 27, 87
Song of Songs, *see* Song of Solomon
Sorghum, 81
Spain, 67, 68, 69
Spatulae, 50
Spears, 14, 51-2
Spells, 31, 65, 90
  See also Charms
Spindles, 25, 88

Spinning, 25, 32, 88
metal, 43
Spoons, 50, 53
Stamps, 30, 60, 69,
seal, 49
Stands, for vessels, 24, 76
Steatite, scarabs, 15
stamp seal, 16
Stone, implements, 5, 6, 7, 12, 13, 65, 82
weapons, 12, 13, 14, 51, 65
seals, 15-17, 21, 30
vessels, 11, 25, 64
inscriptions, 28, 32
semi-precious, 27, 29, 30, 47-8
ossuaries, 58-9
sarcophagi, 59
houses, 72
Strainers, 38, 76
Stratification, 2
Straw, 77-9
Strigils, 51
Stylus, 28, 64
Sulphur, 46
Sumer, 7
Swastika, 42-43
Swords, 14, 52, 80
Symbols, 16, 39-40, 42-3, 49, 57, 59, 60, 61, 62, 63, 64, 65
Synagogues, 3, 21, 35, 70
Syncretism, 35-6, 56, 64-5
Syria, in the prehistoric periods, 6
in the Bronze Age, 7, 8, 13, 16, 17, 29
in the Iron Age, 26, 27, 30-1, 32
in the Graeco-Roman periods, 33-4, 42, 45, 60, 64
in the Arab periods, 66
in modern times, 75
Syrinx, *see* Pan's pipes

Tabernacle, 62
Tablets, cuneiform, 16, 28-30, 32
wax, 64
Talmud, 35, 36, 43, 59, 83, 87
Tarboosh, *see* Fez
Teleilat el-Ghassul, 3
Tell Beit Mirsim, 3
Tell ed-Duweir, 3
Tell el-Ajjul, 3
Tell el-Farah, 3
Tell el-Hesi, 2
Tell Jemmeh, 3
Temples, 61, 63
Tents, 88
Terra sigillata, 39
Terrorism, 74-5
Textiles, 15, 25, 32, 49, 72, 87-9
See also Costume
Thesmophorion, 30
Thrace, 64
Threshing, 82
Tiberias, 63
Tiberius, 61, 63, 64
Titus, 34, 62
Tombs, 2, 58-60
Tools, *see* Implements
Torah, 70
See also Moses, Pentateuch
Torque, 47
Tosefta Sanhedrin, 59
Toys, 27, 56
Trade, 4, 6, 7, 8, 21, 30, 31, 33, 34, 37, 60-1, 71
Transjordan, 3, 29, 35, 75
Trees, 32, 39, 40, 41, 42, 79
Trophy, 62
Trousers, 85, 87
Turks, 67, 68
Turquoise, 29
Tusks, *see* Boar's tusks
Tyre, 19, 61, 62

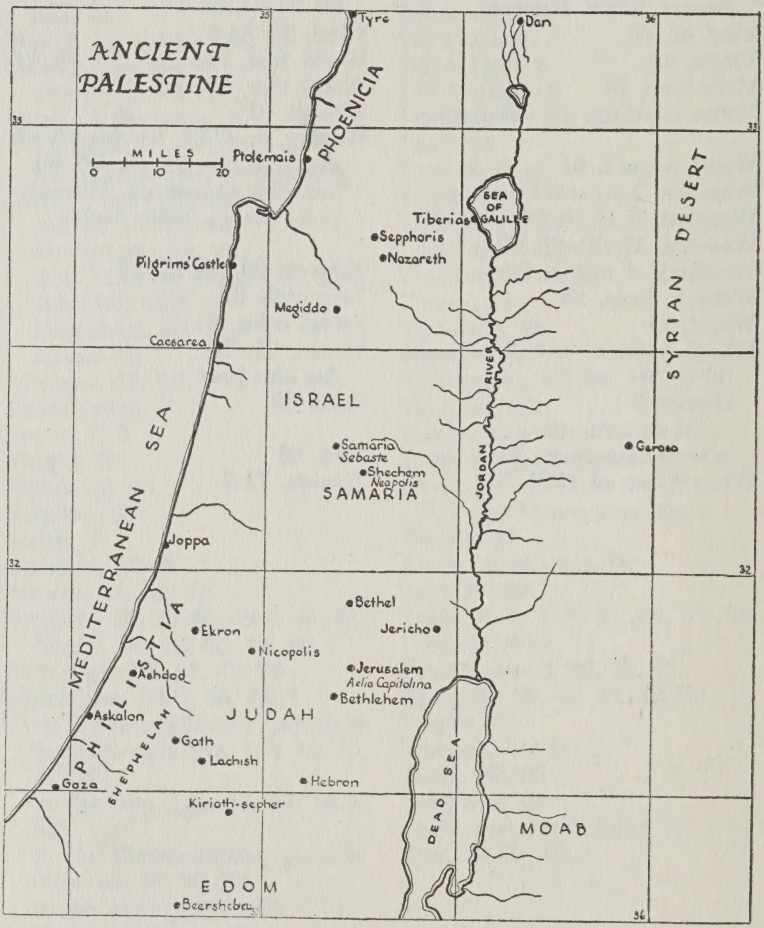
Ugarit, 29
Umayyad caliphs, 67
Unguentaria, 37
Unguents, 37, 44, 50, 58, 64
United Nations, 75
United States, 73
Uzziah, 59

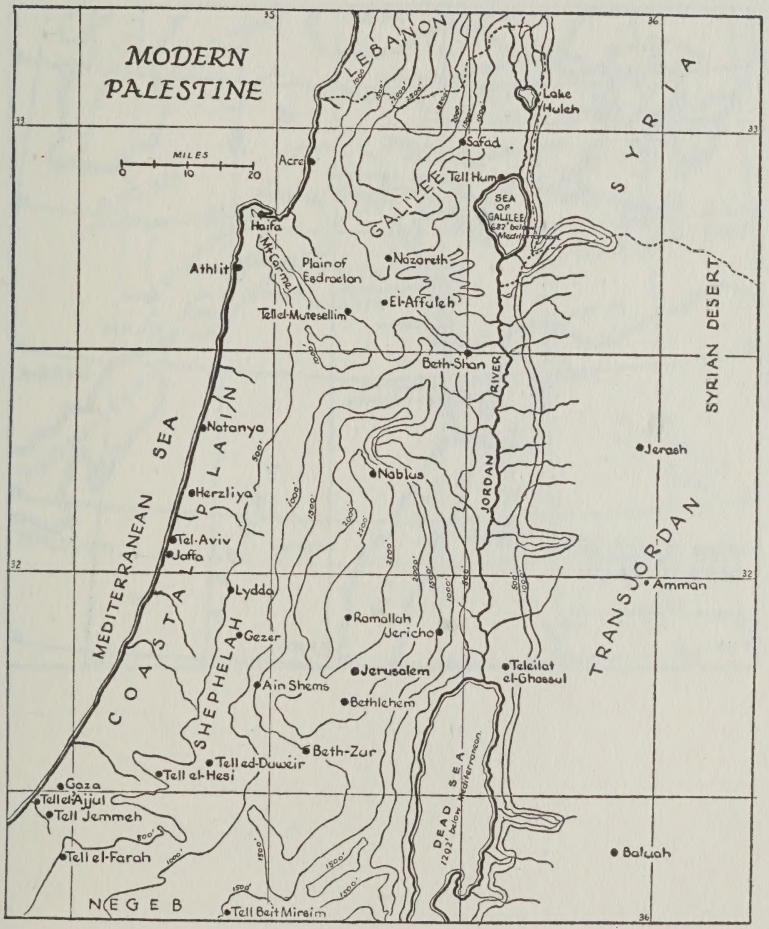
Valerius Gratus, 61
Venus, *see* Aphrodite
Vespasian, 62
Vessels, *see* Pottery, Stone, Bronze, Glass, Faience
Vine, 42, 60
Virgin, 42
Viticulture, 73
Votive offerings, *see* Offerings

Wand, augur's, 61
Wax, *see* "Lost wax" process
Weapons, 7, 12-15, 26, 51-3, 61
Weaving, 25, 32, 88, 89
Weighing of metals, 60-1
Weights, loom, 25
Wheat, 81
Wheel, potter's, 6, 9, 22, 23, 38, 40-1, 76
  chariot, 7
  motif on coins, 61
  wheeled transport, 80
White Paper of 1939, 74
Whorl, spindle, 25
Wine, 23, 24, 37, 43, 45, 76
Winnowing, 82
Wood, 7, 13, 14, 25, 50, 53, 59, 60, 77-84, 86-9
Wool, 25, 84-8
World War, First, 68, 72, 73, 74
World War, Second, 74-5
Wreath, 61
Writing, 6, 27-32, 61, 63, 70, 90
  materials, 28, 32, 64, 70, 90
  See also Cuneiform, Hieroglyphic, Greek, Latin, Arabic

Yahweh, 20, 26, 27, 32
Yebamoth, 87
Yehud coins, 61
Yemen, 71, 75
  See also Jews
Yoke, 80

Zeus, 63
Zionists, 71-5


ANCIENT PALESTINE
Tyre
Dan
PHOENICIA
MILES
0 10 20
Ptolemais
SEA OF GALILEE
Tiberias
Sepphoris
Nazareth
Pilgrims Castle
Megiddo
Caesarea
SYRIAN DESERT
ISRAEL
JORDAN RIVER
Samaria Sebaste
Shechem Neapolis
SAMARIA
Gerasa
MEDITERRANEAN SEA
Joppa
Bethel
Ekron
Jericho
Nicopolis
Jerusalem Aelia Capitolina
Ashdod
Bethlehem
PHILISTIA
Askalon
JUDAH
Gath
SHEPHELAH
Lachish
Gaza
Hebron
Kiriath-sepher
DEAD SEA
MOAB
EDOM
Beersheba

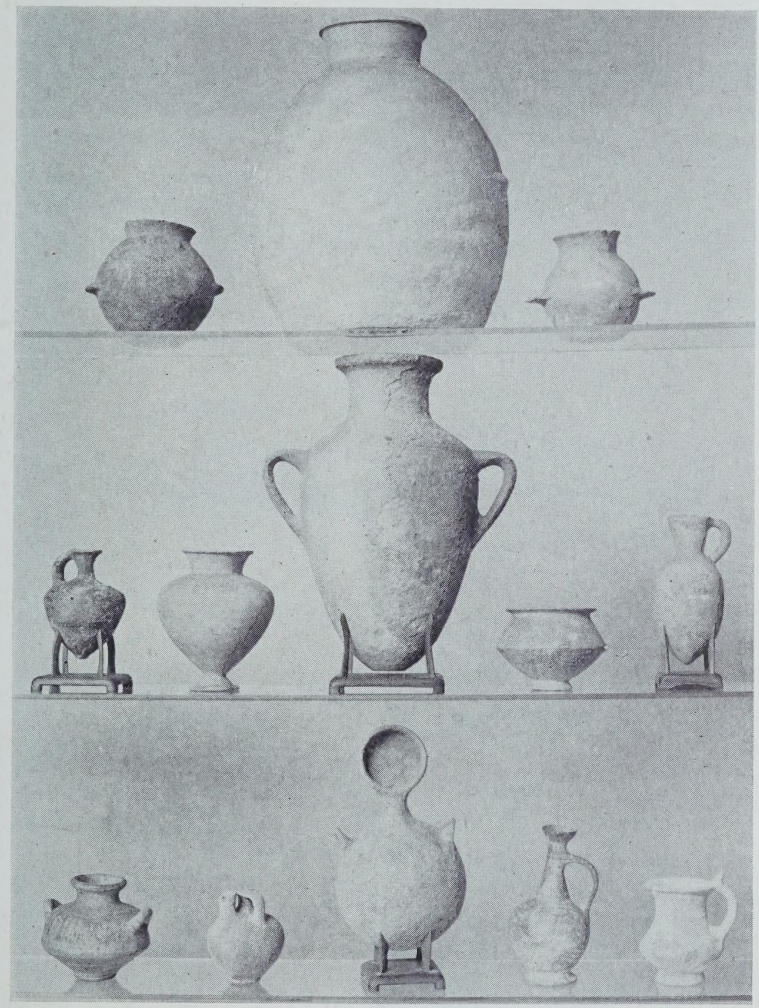

MODERN PALESTINE
MILES
0 10 20
LEBANON
SYRIA
GALILEE
Lake Huleh
Safad
Tell Hum
SEA OF GALILEE
Acre
Haifa
Mt. Carmel
Athlit
Plain of Esdraelon
Nazareth
El-Affuleh
Tell el-Mutesellim
Beth-Shan
JORDAN RIVER
SYRIAN DESERT
MEDITERRANEAN SEA
COASTAL PLAIN
Netanya
Herzliya
Tel-Aviv
Jaffa
Lydda
Nablus
Jerash
Amman
Ramallah
Jericho
Gezer
SHEPHELAH
Jerusalem
Ain Shems
Bethlehem
Teleilat el-Ghassul
TRANSJORDAN
Beth-Zur
Tell ed-Duweir
Tell el-Hesi
Gaza
Tell el-Ajjul
Tell Jemmeh
Tell el-Farah
DEAD SEA
Balua
NEGEB
Tell Beit Mirsim

BALKAN MTS.
BLACK SEA
CAUCASUS MTS.
CASPIAN SEA
MACEDONIA
CONSTANTINOPLE
BOGHAZ KEUI
TROY
GREECE
ASIA MINOR
AEGEAN SEA
EPHESUS
SARDIS
ANATOLIA
MYCENAE
ATHENS
HITTITE EMPIRE
TAURUS MTS.
CARCHEMISH
ANTIOCH
MITANNI
ASSYRIA
MEDIA
KNOSSOS
RHODES
UGARIT (RAS SHAMRA)
NINEVEH (NIMRUD)
CRETE
CYPRUS
SYRIA
TIGRIS R.
ECBATANA
MEDITERRANEAN SEA
BYBLOS (GEBAL)
BEIRUT
SIDON
TYRE
LEBANON RANGE
EUPHRATES R.
AKKAD
ZAGROS MTS.
BAGHDAD
SYRIAN DESERT
DAMASCUS
BABYLON
SUSA
ALEXANDRIA
JERUSALEM
SUMER
ELAM
UR
PALESTINE
PETRA
MEMPHIS
SINAI
EZION-GEBER
SERABIT EL-KHADEM
PERSIA
PERSIAN GULF
EGYPT
SAHARA DESERT
AMARNA
THEBES
RED SEA
ARABIA
ASWAN
NILE RIVER
MEDINA
TROPIC OF CANCER
THE ANCIENT NEAR EAST
MILES
0 200 400
MECCA
20
25
30
35
40
45
50

TABLE OF COMPARATIVE CHRONOLOGY

The background to Palestinian history. Dates for the earlier periods are only approximate.

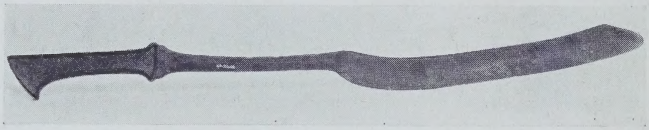
	EGYPT	WEST ASIA	CRETE	GREECE	ROME
	End of Old Stone Age (Palaeolithic) before 12000 (?) New Stone Age (Neolithic) before 4000 Transitional cultures (with trace of metal working) c.4000: "Badarian" "Halaf"				
4000 B.C.	Chalcolithic (earliest development of metal working) c.4000 – c.3000 1st period ("Amratian") "Obeid" period 2nd period ("Gerzean") "Jemdet Nasr" period Beginnings of writing before 3000 B.C. (Prehistoric cultures are dated relatively, not absolutely)		Neolithic, ending about 2900 in Crete and later on the Greek mainland		
	Beginning of Bronze Age 3000 B.C.				
3000 B.C.	Early Dynastic period c.3000 - c.2700 Old Kingdom (Pyramid Age) – c.2700 – c.2300 1st Intermediate period c.2300 – c.2100	Early Dynastic period c.3000 – c.2425 Sumero-Akkadian period c.2425 – 2025 Period of Elamite and Amorite invasions c.2025 – c.1900	Early Minoan (Crete) – c.2900 – c.2000 Early Helladic (Greek mainland) – to c.2000		
2000 B.C.	Middle Kingdom c.2100 – c.1800 2nd Intermediate period c.1800 – 1580 New Kingdom 1580 – 1085	Old Babylonian period c.1900 – c.1600 Decline of Babylonia, Rise of Assyria, Emergence of new races in Syria: 2nd half of 2nd millenium	Middle Minoan c.2000 — c.1600 Middle Helladic c.2000 – c.1600 Late Minoan c.1600 – c.1150 Late Helladic (Mycenaean) c.1600 – c.1150		
1000 B.C.	Gradual decline, from c.1150 Saite period 663 – 525 Persian period 525 – 332 Ptolemaic period 332 – 30 B.C.	Assyrian empire c.1100 – 626 Hebrew independence c.1200 – 586 Neo-Babylonian period 626 – 538 Persian domination 538 – 330 Hellenistic period 330 – 100 B.C. Graeco-Roman period 100 B.C. – A.D. 100	Period of unrest from c.1200 B.C. Greek migrations from c.1000 B.C.	Etruscans (Italy) from 1st half of 8th century Classical Age in Greece 6th – 5th century Hellenistic period 323 to 2nd half of 2nd century B.C.	
Birth of Christ	Roman period 30 BC. – A.D. 400 Coptic period A.D. 400 – 640 Arab conquest 640 Eastern Caliphate 640 – 969	Roman period A.D. 100 – 400 Byzantine period A.D. 400 – 640 In Mesopotamia: Parthian period 143 B.C. – A.D. 226 Sasanian period A.D. 226 – 651 Arab conquest 640 Caliphate 640 – 1258		Roman supremacy 2nd century B.C. – 4th century A.D. Rise of the Germanic people in W. Europe 4th-8th century Byzantine empire (from Constantinople) 330 – 1453	
A.D. 1000	Fatimids, Ayyubids and Mamluks (independent caliphs), Ottoman period 1517 – 1918 (Western intervention from 1850 on) 969-1517	Crusades 1096-1291 (to capture of Acre) Mongolian invasions 13th-15th century Ottoman period 1516-1918		Rivalry between pope and emperor in West 9th-15th century Crusades 1096 – 1272 Capture of Constantinople by Ottoman Turks 1453 Renaissance in Italy 14th-16th century	



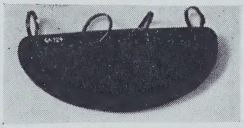
Pottery vessels of the Bronze Age. Top row: Early Bronze Age; middle row: Middle Bronze Age; bottom row: Late Bronze Age. About ⅛ actual size. Page 9.

(*a*)

(*b*)



(*c*)



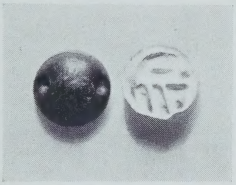
(*d*)

(*e*)

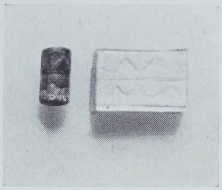
(*f*)

Copper and bronze objects of the Bronze Age: tools, weapons, and garment pins. Length of longest object on each plate: (*a*) 30.7 cm. (12⅛ in.), (*b*) 25.5 cm. (10 in.), (*c*) 62.5 cm. (24¾ in.), (*d*) 14.5 cm. (5¾ in.), (*e*) 13.5 cm. (5⅜ in.), (*f*) 21.7 cm. (8½ in.). Pages 13 and 15.

(*a*)



(*b*)



(*c*)

(*d*)

(*a*) Scarabs of the Bronze Age. Upper row with bronze mounts. ⅔ actual size. Page 15.

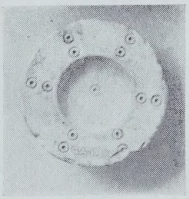
(*b*) Stamp seal of the Bronze Age. Diam. 2.4 cm. (1 in.). Page 16.

(*c*) Cylinder seal of the Bronze Age. Length 1.7 cm. (11/16 in.). Page 16.

(*d*) Scaraboid seals, c. 10th century B.C. Upper right limestone, lower right jasper. The rest haematite. Two-fifths actual size. Page 27.

(*a*) Pottery female figurines of the Bronze Age. Length of largest 19 cm. (7½ in.). Page 17.

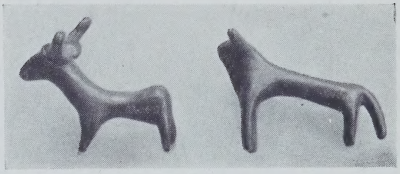
(*b*) Pottery female figurines of the Iron Age. Length of longest 17.4 cm. (6⅞ in.). Page 26.



(*a*) Pottery vessels of the Iron Age. About ⅛ actual size. Page 21.

(*b*) Pottery rattle, length 9 cm. (3½ in.), pottery loom weight, diam. 9.2 cm. (3⅝ in.), limestone cosmetic pallette, diam. 8 cm. (3⅛ in.), all Iron Age; glass spindle whorl diam. 3.2 cm. (1¼ in.), probably Hellenistic period. Pages 25 and 27.

(*a*)



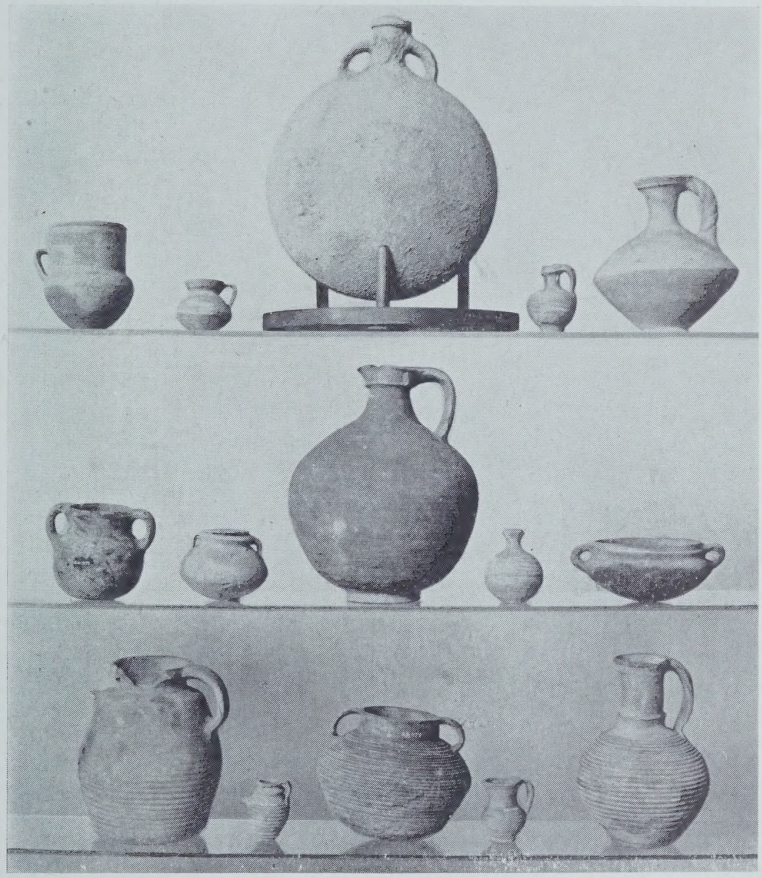
(*b*)

(*a*) Bronze figurine of a god, Early Iron Age. Height 15.3 cm. (6 in.). Page 26.

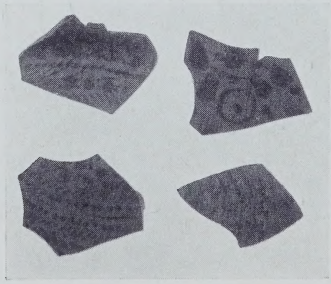
(*b*) Bronze votive animals, Early Iron Age (?). Height of both 4 cm. (1½ in.). Page 27.

(*c*)

(*c*) Pottery animals, Middle Iron Age. Height of left and middle pieces 13.7 cm. (5⅜ in.), of right piece 10.3 cm. (4⅛ in.). Page 27.

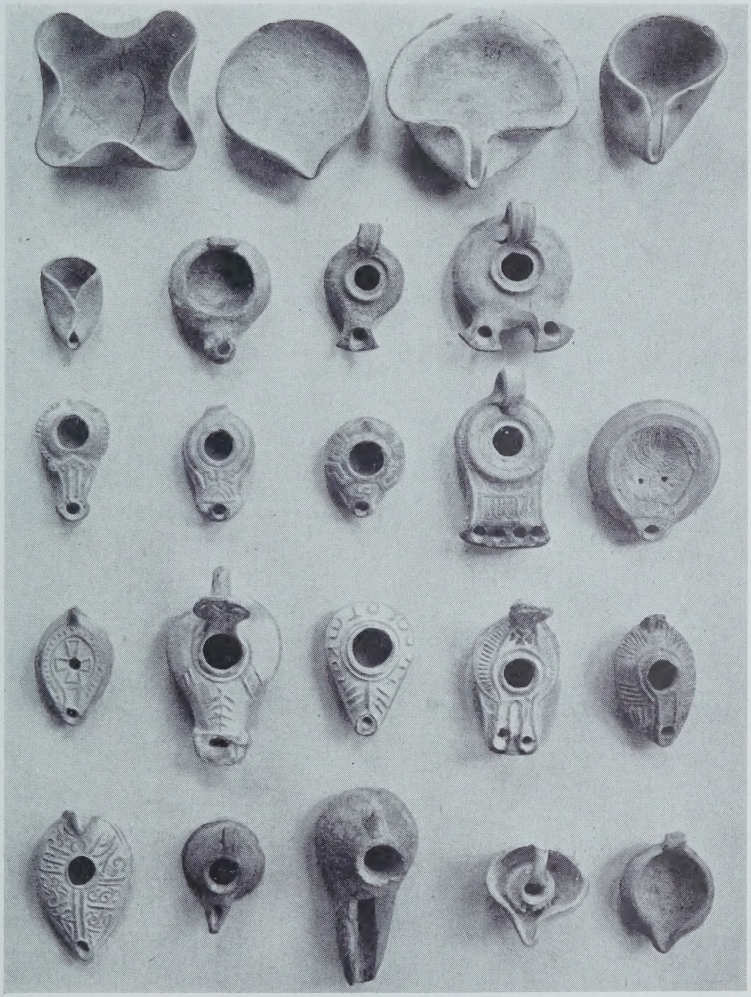


Pottery vessels of the Hellenistic, Roman and Byzantine periods: common types. About 1/9 actual size. Page 36.

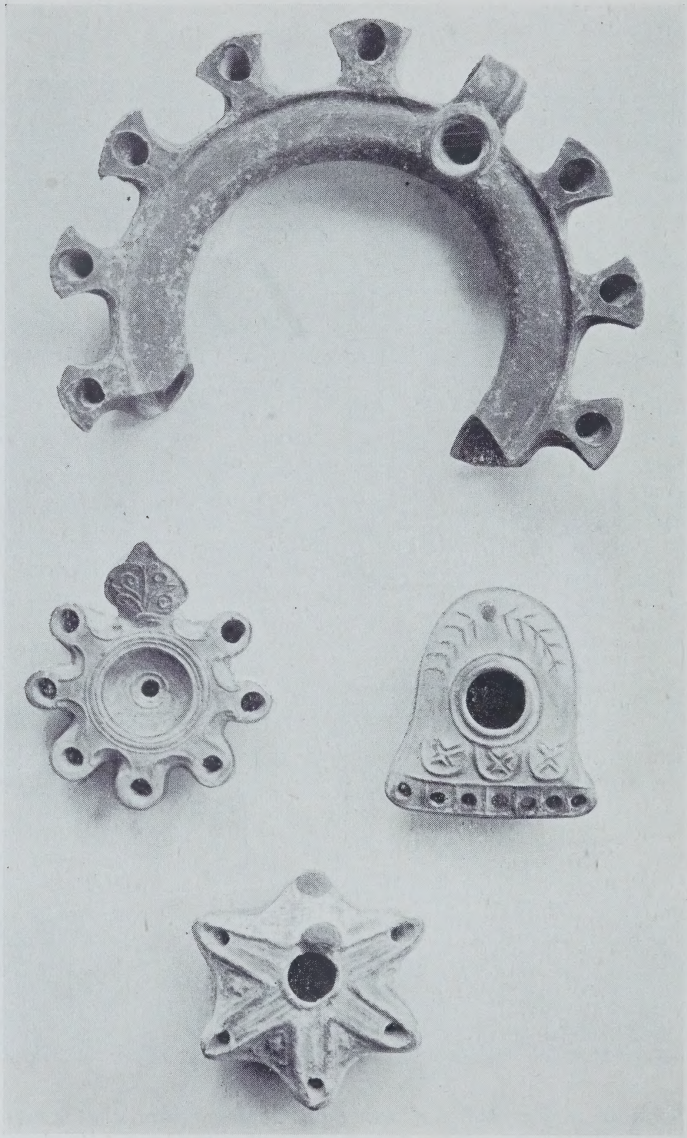


(*a*) Pottery vessels of the Hellenistic and Roman periods: better vessels. About ⅛ actual size. Page 36.

(*b*) Sherds of Nabataean decorated pottery, first century B.C. to first century A.D. About ⅓ actual size. Page 38.



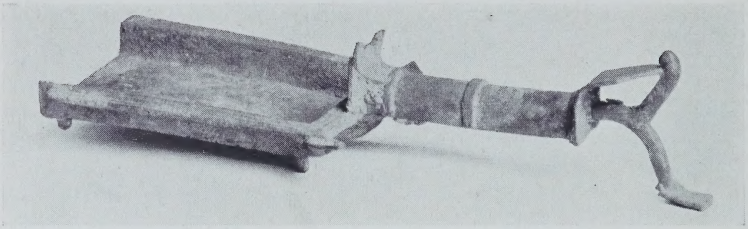
Series of pottery lamps showing development from the Bronze Age to the Arab period. Length of lamp with Greek inscription (4th row centre) 10.2 cm. (4 in.). Page 40.



Forms of many-wicked pottery lamps, 2nd century B.C. to 8th century A.D. Diam. of largest (to tip of nozzles) 24.5 cm. (9⅝ in.). Page 41.

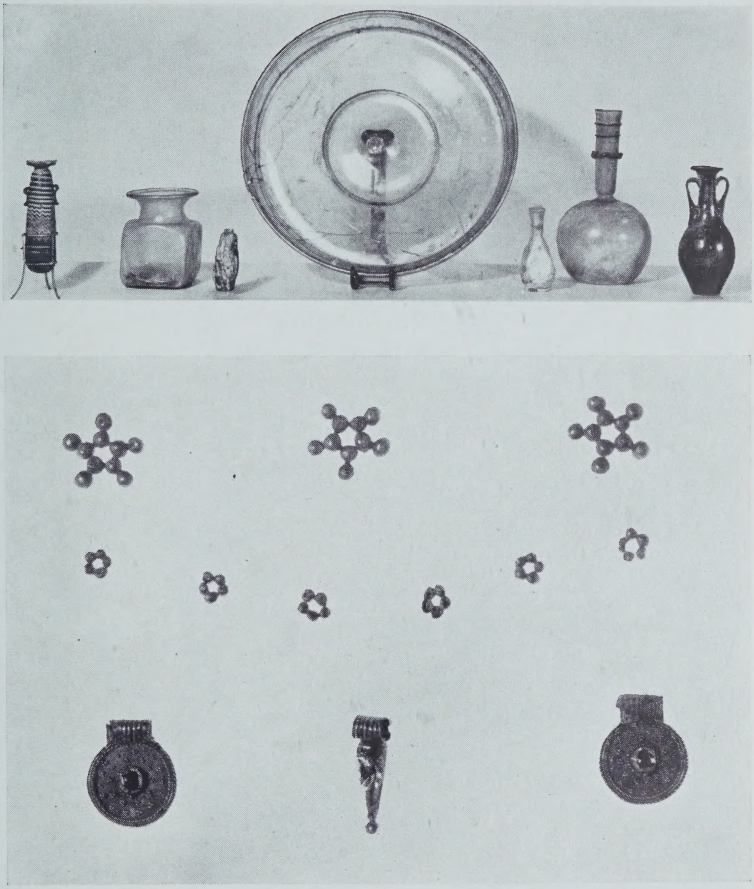
(*a*) Bronze vessels of the Roman period. About ⅛ actual size. Page 43.

(*b*) Bronze lamps, mostly Byzantine period. About ⅛ actual size. Page 44.



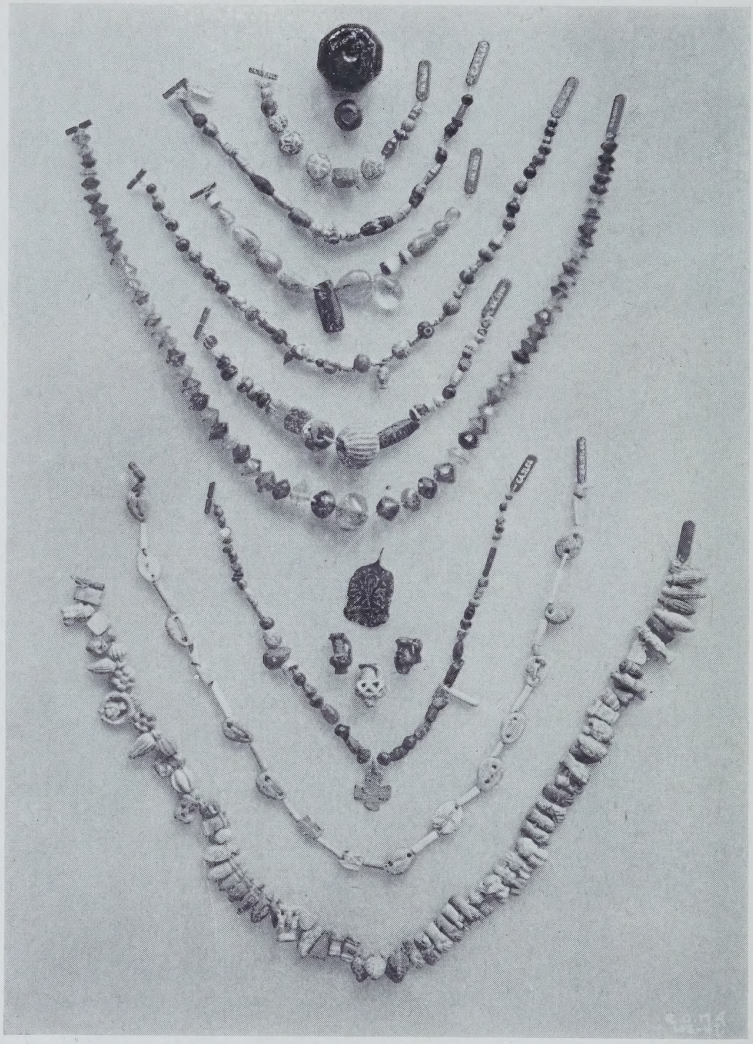
(*a*) Bronze ritual shovel, Roman period. Length 25 cm. (9⅞ in.). Page 57.

(*b*) Bronze Christian censer, 6th to 8th century A.D. Height 22.8 cm. (9 in.). Page 57.

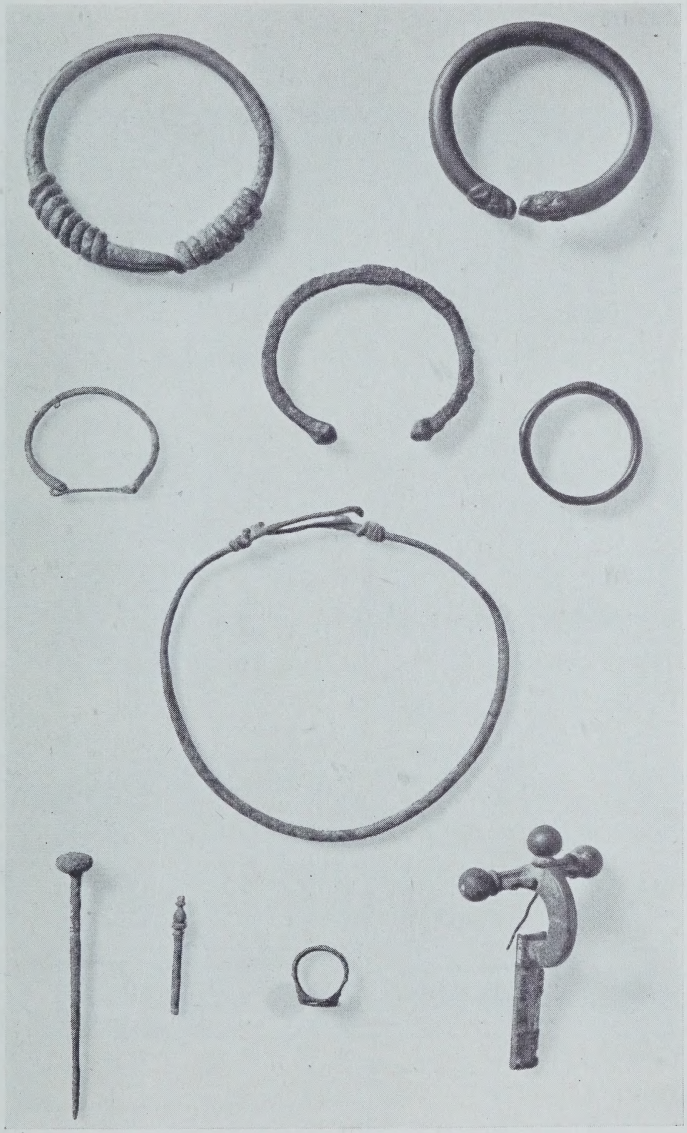


(*a*) Glass vessels. Extreme left, 5th or 4th century B.C. The rest 3rd to 7th century A.D. 1/7 actual size. Page 45.

(*b*) Gold jewellery, probably Hellenistic period. Height of granulated disk pendants 1.6 cm. (⅝ in.). Page 47.

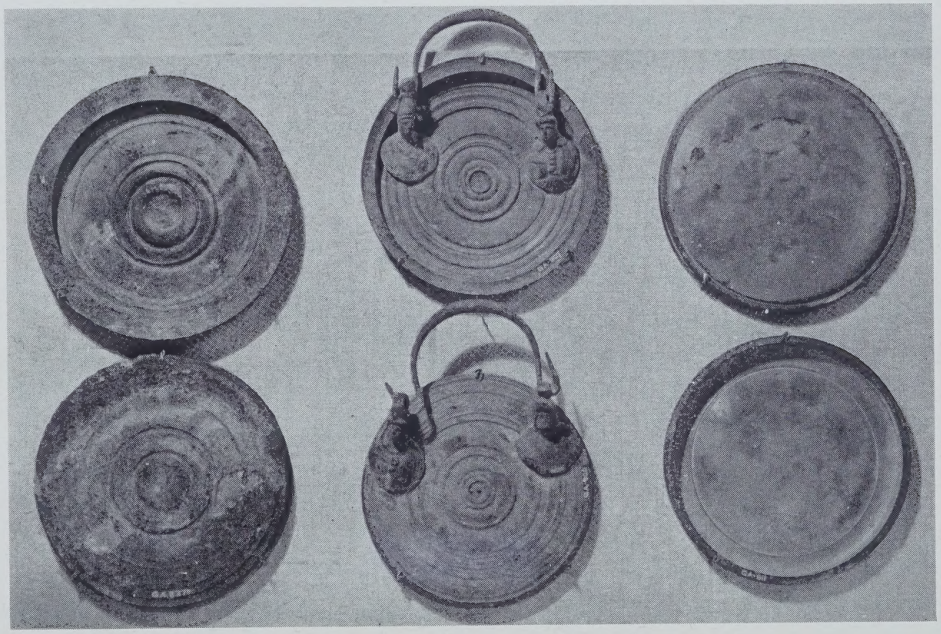


Ancient beads and amulets, 7th century B.C. to 7th century A.D.
About ¼ actual size. Page 47.

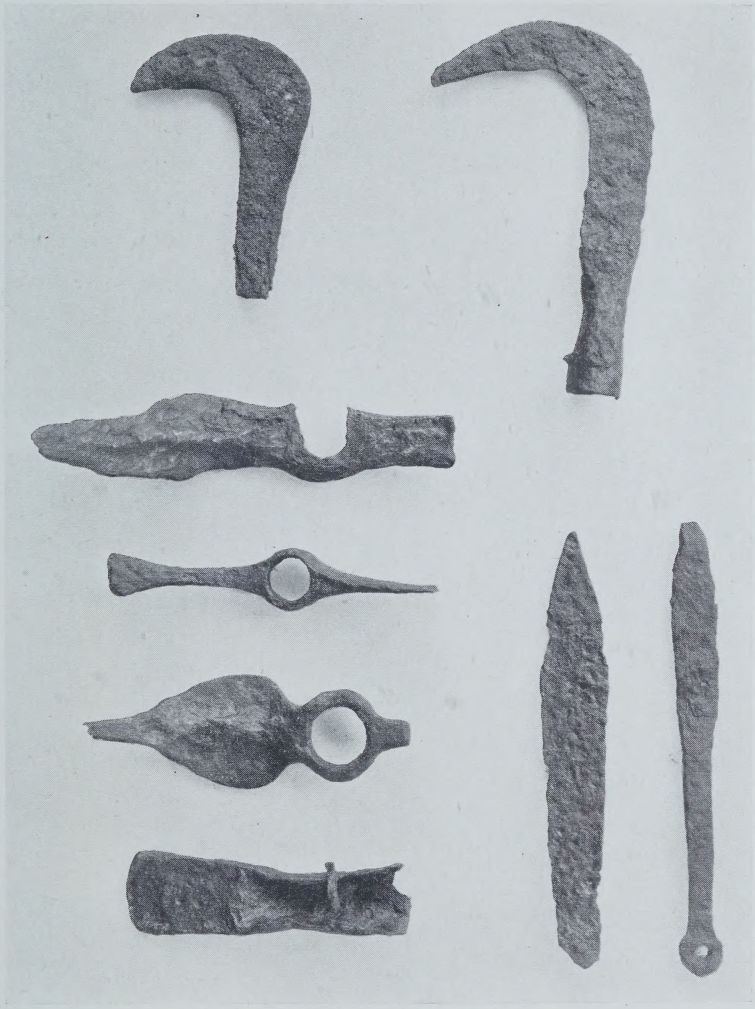


Costume accessories, all bronze except iron bracelet (upper centre) and small black glass bracelet. Roman period. Length of fibula 11.4 cm. (4½ in.). Page 46.

XVI

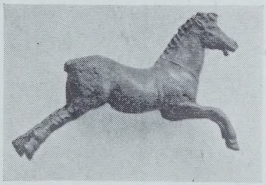


Bronze mirrors, Roman period. Diam. of middle specimen 14.6 cm. (5¾ in.). Page 50.



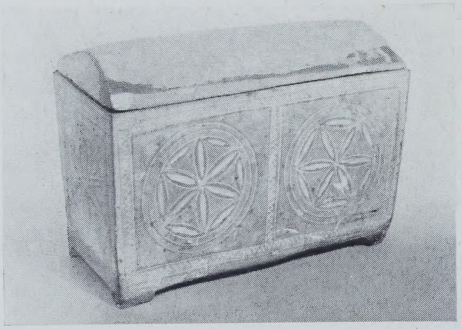
Iron tools of the Roman period. About 2/7 actual size. Page 51.

Kohlsticks and spatulae, needles, spoons, hasps and keys, mostly bronze. Roman period. Length of large key 20.7 cm. (8⅛ in.). Pages 50, 51, 53, and 54.

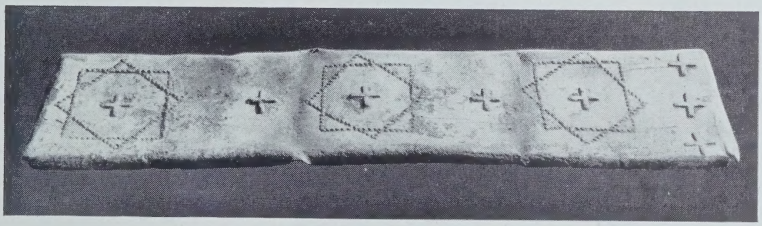


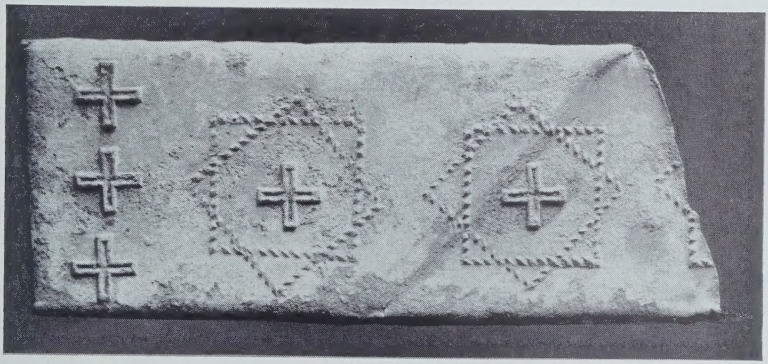
(*a*) Figurines, Roman and Byzantine periods. All pottery except lower right which is bone. 2/7 actual size. Page 54.

(*b*) Bronze animals, Roman period. Length of horse 5.7 cm. (2¼ in.), of others 4.7 cm. (1⅞ in.), 6.1 cm. (2⅜ in.), 4.5 cm. (1¾ in.). Page 55.



Limestone ossuaries, first century B.C. to first century A.D. (*a*) Length 57 cm. (20½ in.). (*b*) Length 39.5 cm. (15½ in.). (*c*) Length 59.8 cm. (23½ in.). Page 58.





Lead coffins, 4th century A.D. (*a*) Length 206 cm. (81 in.). (*b*) Length 189 cm. (74 in.). (*c*) Greatest present length 114 cm. (45 in.). Page 59.

(*a*)

(*b*)

(*c*)

(*d*)

(*e*)

(*f*)

(*g*)

(*h*)

(*i*)

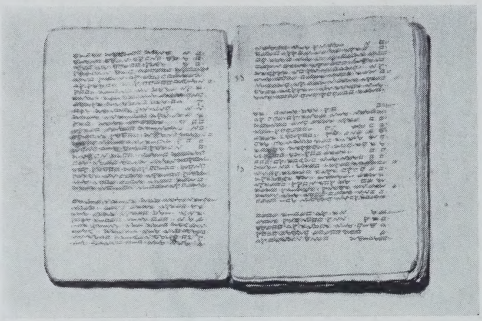
(*j*)

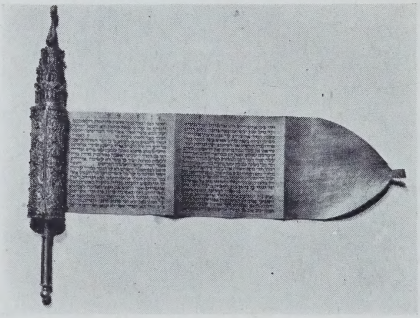
(*k*)

(*l*)

Selection of coins, mostly Jewish. (*a*) John Hyrcanus, bronze. (*b*) Alexander Jannaeus, bronze. (*c*) Herod the Great, bronze. (*d*) Pontius Pilate, bronze. (*e*) First Revolt, silver. (*f*) Vespasian, commemorating the capture of Jerusalem, gold. (*g*) The city of Tiberias, under Hadrian, bronze. (*h*) The city of Aelia Capitolina, under Hadrian, bronze. (*i*) To (*l*) Second Revolt: Lyre, silver; amphora, bronze; lulab and ethrog, silver; ark and tabernacle, silver. Actual size. Page 60.

Arab pottery vessels, 8th to 14th century A.D. About ⅛ actual size. Page 69.



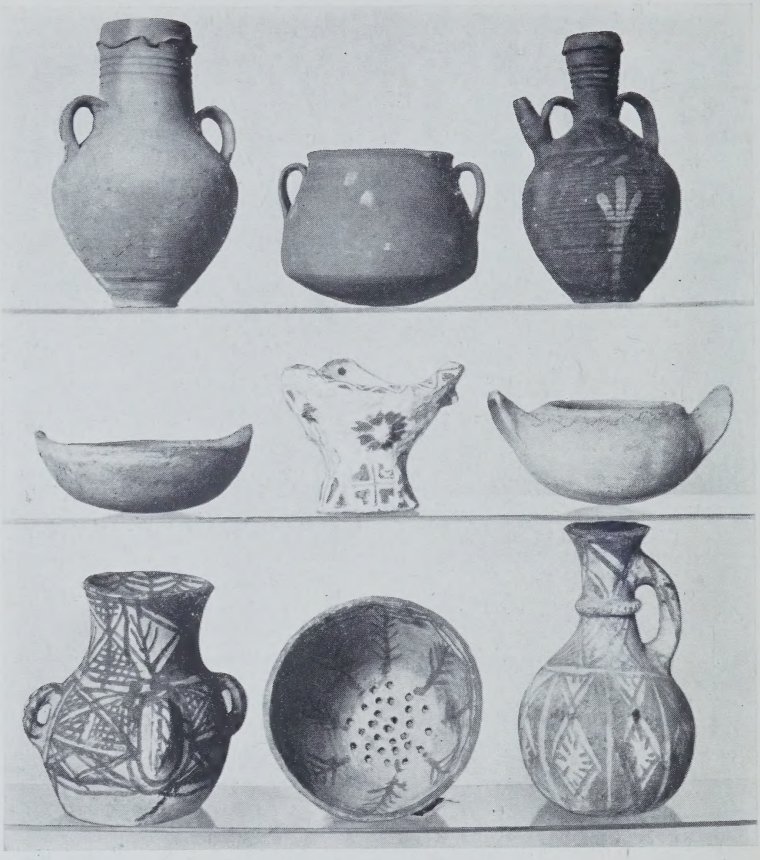


(*a*) Samaritan manuscript, on paper, 18th century A.D. Length of page 22 cm. (8⅝ in.). Page 70.

(*b*) Torah scroll, on ram's skin, 18th century A.D. (?) Width of scroll 22 cm. (8⅝ in.). Page 70.

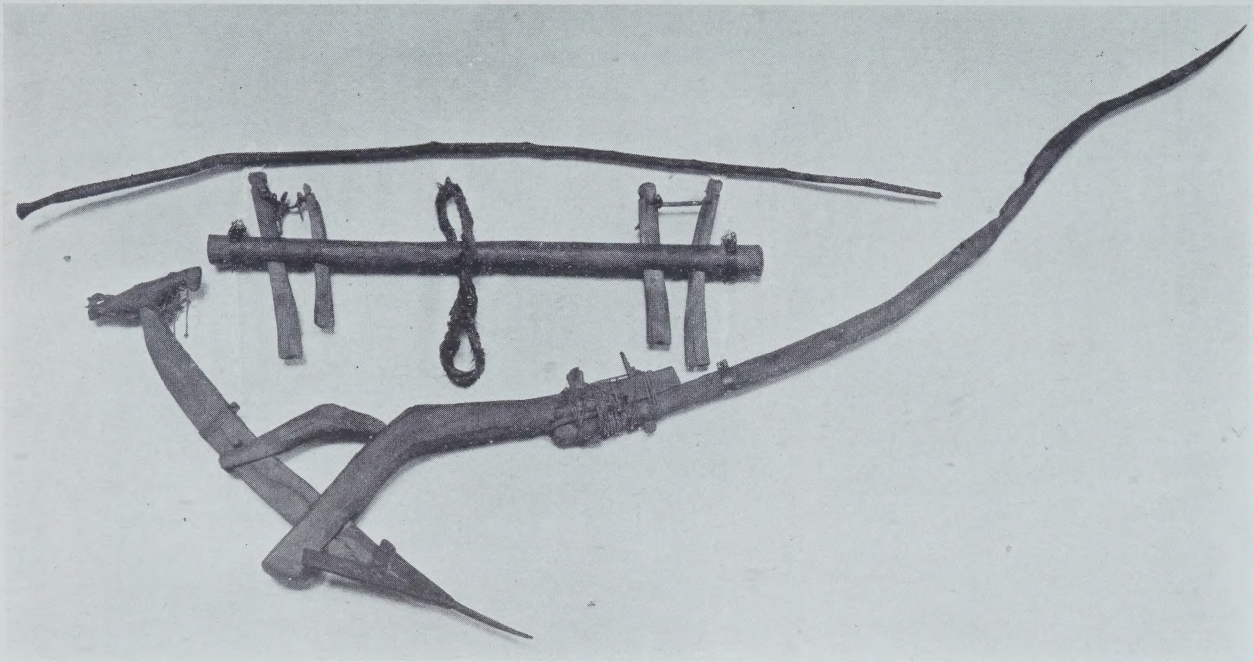
(*c*) Megillah scroll, on vellum, with silver-gilt roller case, 19th century A.D. Width of scroll 15.4 cm. (6 in.). Page 70.

Arabic Christian manuscript, on paper, 19th century A.D.
Length of page 43.5 cm. (17¼ in.). Page 70.

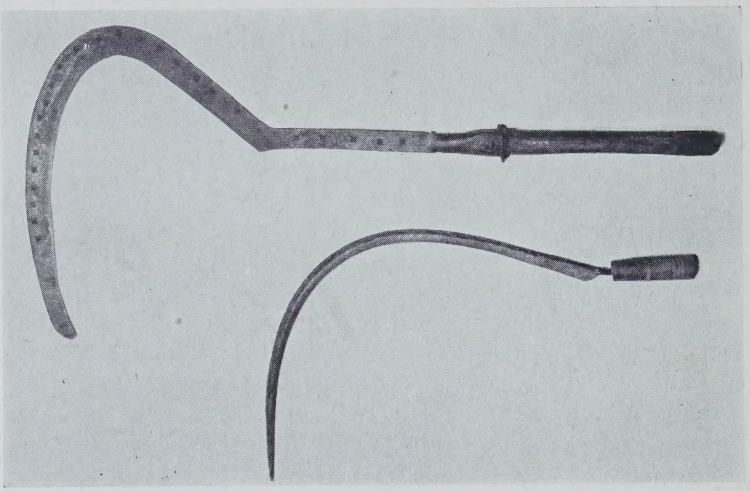


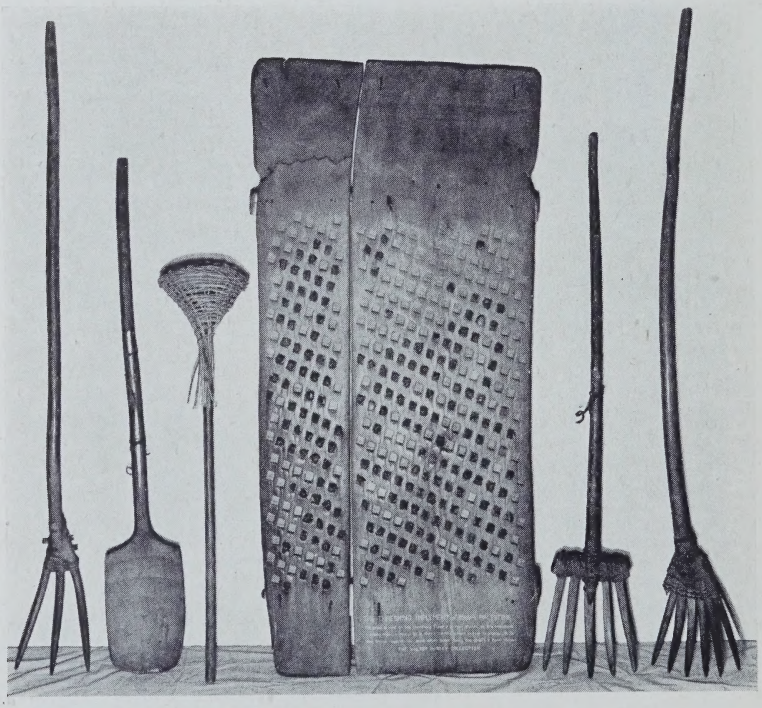
(*a*) Pottery vessels, modern. About ⅛ actual size. Page 75.

(*b*) Homemade grain bin, modern. Height 104 cm. (41 in.). Page 79.



Plow, yoke, and goad, modern. About 1/18 actual size. Page 80.





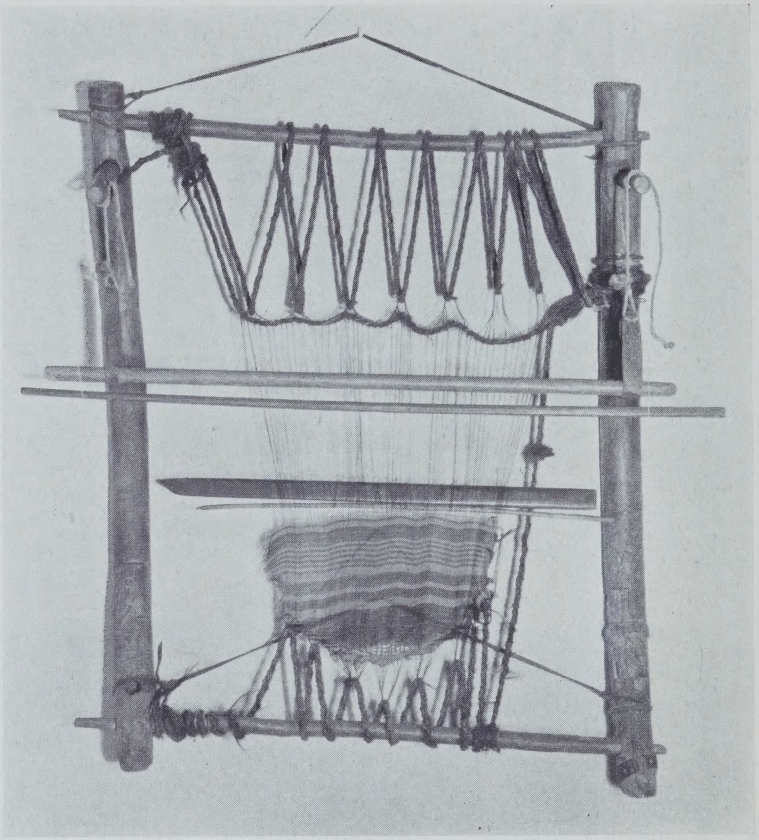
(*a*) Iron sickles, modern. Lengths 85 cm. (33½ in.) and 54.5 cm. (21½ in.). Page 81.

(*b*) Wooden harvesting implements, modern. About 1/20 actual size. Page 82.

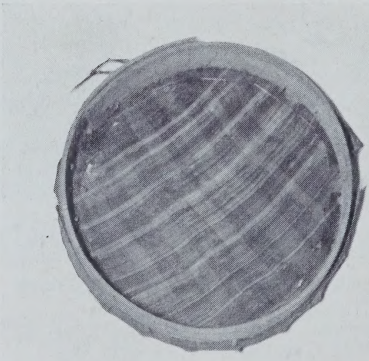
Copyright, the Matson Photo Service, Jerusalem

(*a*) Rotary hand mill, basalt with mud basin, modern. Diam. of stone 38 cm. (15 in.). Page 83.

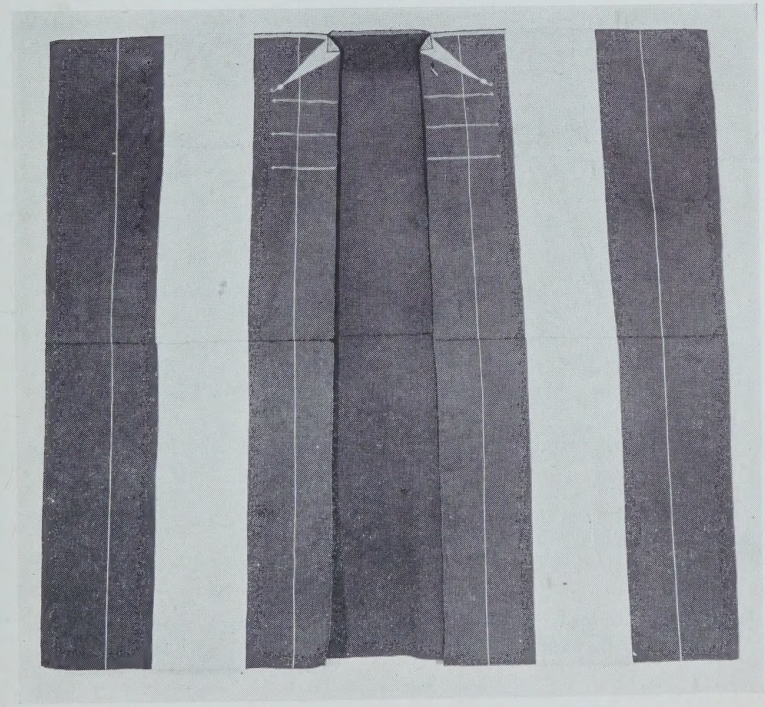
(*b*) A Palestinian handmill in use. Pages 83 and 86.



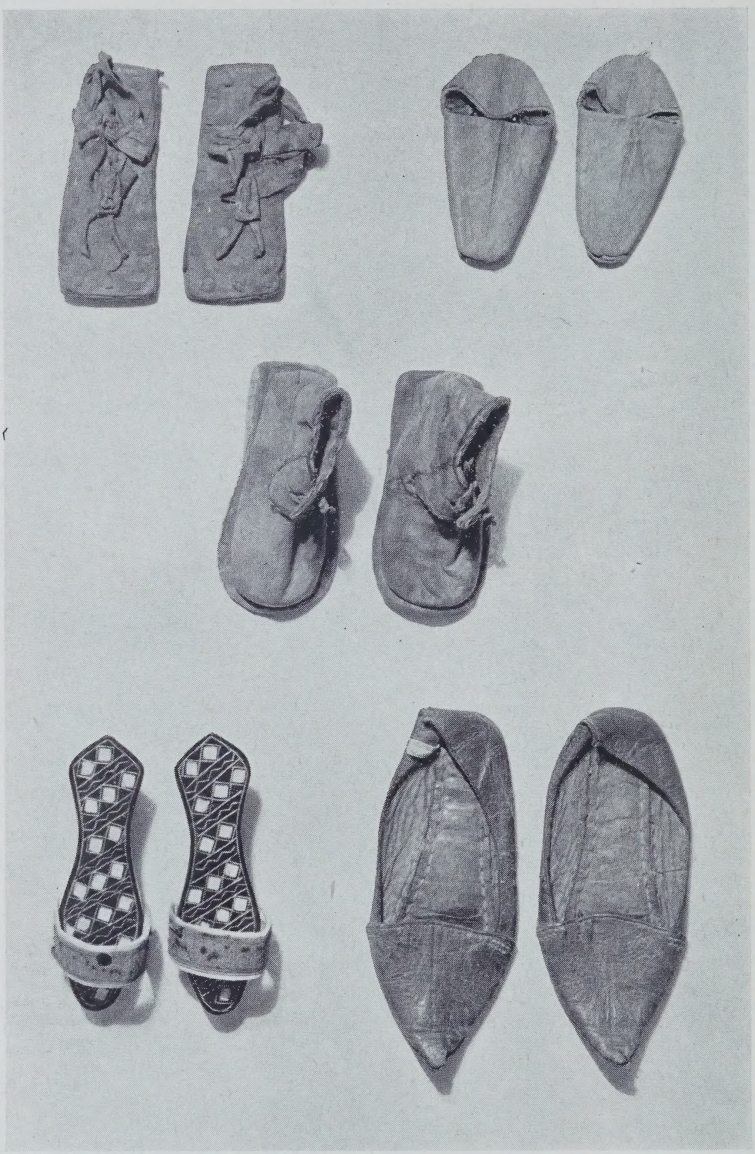
(*a*) Loom for weaving a meal sieve, modern. Height 108.7 cm. (43 in.). Page 88.



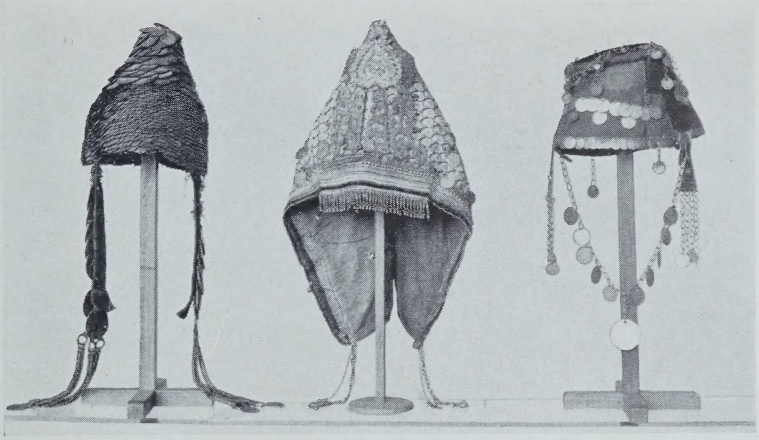
(*b*) Horse-hair meal sieve, modern. Diam. 39.3 cm. (15½ in.). Page 83.



(*a*) Peasant women's garments, cotton with coloured embroidery, modern. Page 86.
(*b*) Man's coat of sheep's wool and goat's hair, modern. Pages 84 and 85.



Footwear, modern. Sandals camel's hide, clogs wood with mother-of-pearl, the rest leather. Pages 85 and 86.



Copyright, the Matson Photo Service, Jerusalem

(*a*) Women's headdresses, modern. The middle example is Yemenite (page 71). See Plate XXIX (*b*) for the usual form of hood. Page 86.

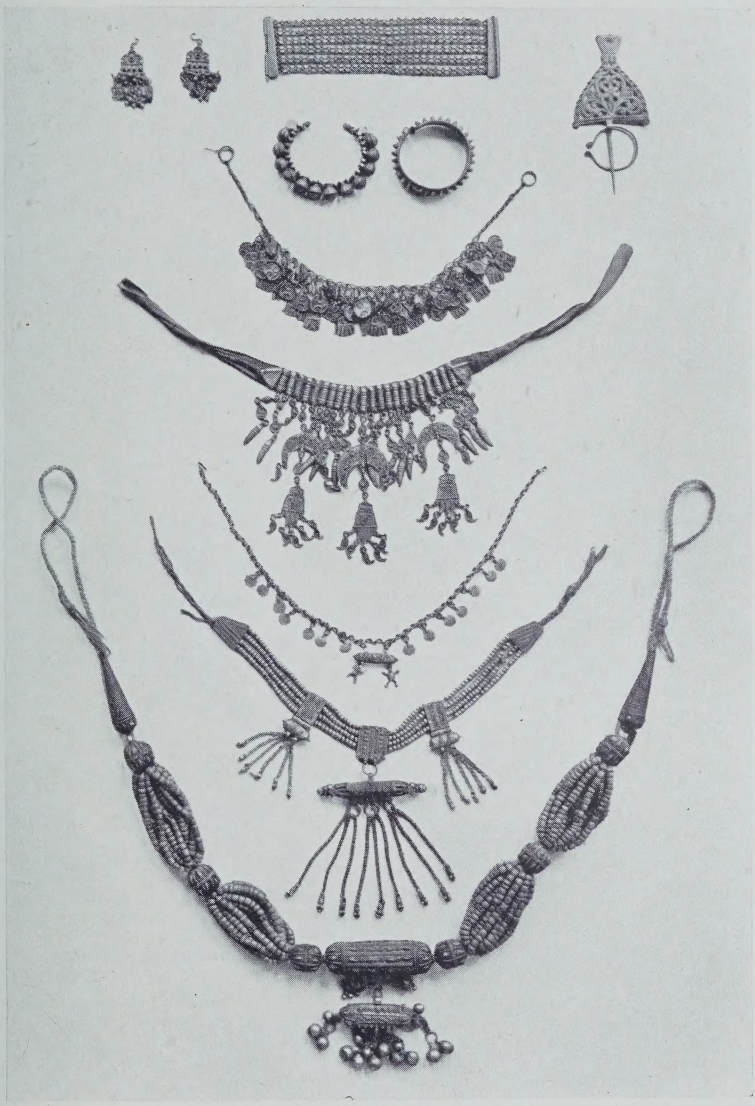
(*b*) Bethlehem woman illustrating how some of our costume is worn. Page 86.

Copyright, the Matson Photo Service, Jerusalem

Copyright, the Matson Photo Service, Jerusalem

(*a*) Bedouin tent. Pages 72, 85, and 88.

(*b*) Cotton carders, illustrating the use of our cotton bow. Page 87.



Silver jewellery, modern. ⅛ actual size. Page 89.